

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 18<sup>TH</sup> NOVEMBER, 2023**

The SEAC met on 18<sup>th</sup> November, 2023 at 03:30 PM by Virtual mode (VC) through video conferencing in Google Meet under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

- |                               |   |                       |
|-------------------------------|---|-----------------------|
| 1. Sri Sashi Paul             | - | Chairman (through VC) |
| 2. Dr. K. Murugesan           | - | Member Secretary      |
| 3. Dr.Chittaranjan Panda      | - | Member (through VC)   |
| 4. Prof. (Dr.) H.B. Sahu      | - | Member (through VC)   |
| 5. Sri Jayant Das             | - | Member (through VC)   |
| 6. Er. Fakir Mohan Panigrahi  | - | Member (through VC)   |
| 7. Prof. (Dr.) B.K. Satapathy | - | Member (through VC)   |
| 8. Dr. K.C.S Panigrahi        | - | Member (through VC)   |
| 9. Prof. (Dr.) Abanti Sahoo   | - | Member (through VC)   |
| 10. Dr. Ashok Kumar Sahu      | - | Member (through VC)   |
| 11. Dr. Rabinarayan Patra     | - | Member (through VC)   |
| 12. Er. Kumud Ranjan Acharya  | - | Member (through VC)   |

**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 FOR BALANDA STONE QUARRIES CLUSTER (7,9,14,15,16) OVER AN AREA OF 44.05 ACRES OR 17.823 HECTARES BEARING KHATA NO. 504, 506 AND PLOT NO. 2473/P, 1899/P, 2008/P & 2009/P, 2473/P, 2473/P & 2010/P AND 1893/P & 2010/P IN VILLAGE BALANDA, TAHASIL-LATHIKATA, DISTRICT- SUNDARGARH OF SRI BIJAY AGARWAL (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 5 STONE QUARRIES) – TOR**

1. The SEAC in its meeting held on 31-07-2023 decided to defer the proposal to the next meeting and will consider it after receipt of the following from the proponent:
  - (i) Details of total number of quarries present in the Balanda Stone Quarries Cluster (including existing and proposed mines) in tabulated form.
  - (ii) Details of status of existing mines & proposed mines with name of lessee.
  - (iii) Copies of Environment Clearance, CTE & CTO of existing mines in cluster.
  - (iv) A detailed notes giving reason why the EIA study undertaken and ToRs issued earlier does not contain all quarries i.e. Balanda Stone Quarries 1 to 16 and presently another proposal has been submitted for issue of ToRs in cluster approach.

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2. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Details of total number of quarries present in the Balanda Stone Quarries Cluster (including existing and proposed mines) in tabulated form.	Details of all quarries are in tabular form. Annexed herewith. (Annexure-1)	Details of all quarries submitted.
2.	Details of status of existing mines & proposed mines with name of lessee.	Details of status of existing mines & proposed mines with name of lessee (Annexure -2)	Details of all quarries submitted.
3.	Copies of Environment Clearance, CTE & CTO of existing mines in cluster.	Copies of Environmental Clearance, CTE & CTO of existing mines in cluster (Annexure -3)	EC, CTE and CTO copies of Balanda Stone Quarry No – 2, 3 and 10.
4.	A detailed notes giving reason why the EIA study undertaken and ToRs issued earlier does not contain all quarries i.e. Balanda Stone Quarries 1 to 16 and presently another proposal has been submitted for issue of ToRs in cluster approach.	A detailed notes on Balanda Stone Quarries Cluster (1 to 16) is annexed herewith (Annexure-4)	Justification has been submitted where it is mention proposed quarries 14,15 & 16 were identified as new source and approved after 14.07.2021.

After detailed discussion, the SEAC decided that the proponent shall be called for a detailed presentation for consideration of ToRs.

#### ITEM NO. 02

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S PENGUIN TRADING & AGENCIES LIMITED OF EXPANSION OF RAIKELA AND TANTRA IRON MINES FROM 2.16 TO 3.024 MTPA THROUGH OPENCAST MINING METHOD WITH MAXIMUM EXCAVATION OF 3.27 MTPA (ROM + OB) OVER AN ML AREA OF 49.372 HA. IN VILLAGES – RAIKELA, TEHSIL - KOIDA OF SUNDARGARH DISTRICT OF SRI RAMAN RASHMI NAYAK - EC**

1. This proposal is for Environmental Clearance for M/s Penguin Trading & Agencies Limited of Expansion of Raikela and Tantra Iron Mine from 2.16 to 3.024 MTPA through Opencast mining method with maximum excavation of 3.27 MTPA (ROM + OB) over an ML area of 49.372 Ha. in villages – Raikela, Tehsil - Koida of Sundargarh district of Sri Raman Rashmi Nayak.
2. **Category:** The project falls in category B1 of the schedule in activity 1(a) - Mining of minerals as per EIA notification 2006 and its amendments. The Project Proponent has proposed expansion of 40%, in Raikela and Tantra Iron Mines from 2.16 to 3.024 MTPA and has applied for EC under 7(ii) (a) as per MoEF & CC OM dated 11th April, 2022.
3. **Project Details:** Raikela and Tantra Iron Ore Mines is located in village - Raikela, Tahasil - Koida, District - Sundargarh, State - Odisha, over an area of 49.372 ha.in which 48.632 ha. land is forest land. Proposed Expansion of Raikela and Tantra Iron Ore Mine from 2.16 to 3.024 MTPA through Opencast mining method with maximum excavation of 3.27 MTPA over an ML area of 49.372 Ha. in villages – Raikela, Tehsil - Koida of Sundargarh district in Odisha.

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4. Mining plan is approved by IBM vide letter no. BBS/SNG/IRON/2201/MRMP/2022-23 dated 14.02.2023.
5. Forest Clearance (Stage II) obtained over an area of 45.585 ha excluding Safety Zone vide letter no. 8-23/2007-FC dated 15.07.20215. Forest Clearance over Safety Zone Area over 3.047 ha. For Change of land use from safety zone to mining, Clearance granted over 0.218 ha. under safety zone obtained vide letter no. 10F (Cons) 25/2020/12478/F&E dated 17.08.2020.
6. Mining Lease of Raikela and Tantra Iron Mines was granted in favor of Sri Ramji Lal Bathwal for 20 years on 03.12.1986. The lease was transferred to M/s Penguin Trading & Agencies Ltd. on 23.06.1991.
7. 1st Renewal of lease was applied on 22.02.2005. Under Section 8(A) of MMDR Act of 12.01.2015, lease period was extended up to 02.12.2036.
8. M/s Penguin Trading and Agencies Pvt. Ltd. had obtained Environmental Clearance for production of 2.16 MTPA of Iron Ore vide EC Identification No. - EC22B001OR172761, File No.-215287/64-MINB1/12-2021, Date of Issue 17.03.2022.
9. Consent To Establish issued vide letter No. 3406/IND-II-CTE-6281/2022 dated 04.03.2022 and after amendment, letter issued vide.10085/IND-II-CTE-6281/2022 dated 09.06.2022 for Production of 2.16 MTPA Iron ore with crushing plants of 300 TPH and screening plants of 750 TPH from the State Pollution Control Board (SPCB), Odisha and is valid for 05 Years.
10. Consent To Operate was issued vide letter No. 11015/IND-I-CON-4573 dated 24.06.2022 for production of 2.160 MTPA with Iron ore crushing plants of 300 TPH and screening plants of 750 valid up to 31.03.2026.
11. Certified Report of EC Compliance from RO, MOEF&CC, Govt. of India vide File no. 109 – 93 dated 10-06-2022 has been issued and there was no non-compliance. For a period of October 2022 to March 2023, compliance report has been submitted and Project Proponent has asked for 2 months for submitting the certified EC Compliance report.
12. Site Specific Wildlife Conservation plan 1st approved plan vide. 27551WL-C-SSP-197/10 dated 13.04.2010.
13. NOC from Ground Water for 48 KLD approved vide letter no. CGWA / NOC / MIN / REN / 3 / 2021 / 6169 dated 10.10.2021 and has been renewed which is valid upto 09.10.2023.
14. Surface Water withdrawal permission of 0.123 cusec obtained from Department of Water Resources, Government of Odisha vide letter no. 8632/WR dated 01.05.2020.
15. DGMS Approval for Joint Mining between JSPL and Penguin Trading Ltd. vide letter no. 330209/SEZ/Chaibasa Region/Perm/2020/5846 dated 28.08.2020.
16. MoU between JSPL and M/s PTAL, for joint mining was done on dated 15.10.2016
17. Power approval from WESCO for 533 KVA was done on dated 01.11.2018 for 5 years.
18. DGPS Approval by ORSAC done by vide map no. 1746/1, dated 19.04.2017.
19. TOR Details: Proposed expansion of Raikela and Tantra Iron Mines from 2.16 to 3.024 MTPA is based on MoEF & CC OM dated 11<sup>th</sup> April 2022, ToR is exempted for expansion up to 40% under

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7(ii) (a) of EIA notification 2006. Final EIA/EMP report is prepared on the basis of standard TOR as per the said notification.

20. **Public hearing details:** The Public Consultation was conducted successfully on 21.10.2021 at 11.00 AM. Proceedings of Public Consultation issued letter vide Letter no-19360/IND-II-PH-926 dated-06-12-2021. Proposed expansion of Raikela and Tantra Iron Mine from 2.16 to 3.024 MTPA is based on MoEF&CC OM dated 11<sup>th</sup> April 2022, public hearing is exempted for expansion up to 40% under 7(ii) (a) of EIA notification 2006.

21. **Eligibility of the Project under clause 7(ii) "a":**

Sl. No.	Criteria to be fulfilled	Reply by PP
Point-1 :	The project should have gone through the public hearing process, at least once, for its existing EC capacity on which expansion is being sought, except those category of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments	Public hearing was conducted on 21.10.2021, for enhancement in production from 1.080 million TPA to 2.160 million TPA. Issues raised in PH including education, health and employment etc., and action plan to address the issues was prepared for a period of 5years. Till now Rs. 4.78 Cr. has been spent.
Point-2 :	There should not be change in Category of the project from 'B2' to 'B1' or 'A' due to proposed modernisation or expansion.	The project falls in category B1 of the schedule 1(i) (a) "Mining of Minerals" as per EIA notification 2006 and its amendments. Post expansion of 40% the project will still remain in same category as per MoEF & CC OM dated 20th April, 2022.
Point-3 :	There is no additional land acquisition or forest land diversion involved for the proposed expansion or there is no increase in lease area with regard to mining vis-à-vis the area mentioned in the EC, based on which public hearing has been held earlier.	There is no change in land area after expansion of the proposed project with respect to forest land diversion or increase in lease area. The land is distributed as 48.632 ha of Forest land and 0.740 ha of Non-Forest Govt. Land.
Point-4 :	The proposed expansion shall not be more than 50% of production capacity as mentioned in the prior EC, issued on the basis of public hearing held and the same shall be allowed in minimum three phases.	The existing EC has been granted for enhancement in production from 1.08 MTPA to 2.16 MTPA vide EC Identification No.-EC22B001OR172761, F.No.-215287/64-MINB1/12-2021 dated 17th March 2022. The proposed expansion is from 2.16 MTPA to 3.024 MTPA i.e., 40% enhancement in capacity. The enhancement shall be under taken in 2 phases as per MoEF & CC OM dated 11th April, 2022.
Point-5 :	Predicted environmental quality parameters arising out of proposed expansion/modernization shall be within the prescribed norms and the same shall be maintained as per prescribed norms	Baseline parameters have been studied as per MoEF & CC and CPCB norms. Impacts have been predicted and mitigation measures have been proposed to maintain the environmental quality parameters well within the prescribed limits.

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Sl. No.	Criteria to be fulfilled	Reply by PP
Point-6 :	The proposed expansion should not result in reduction in the greenbelt area as stipulated in the earlier EC, or if the existing ratio of greenbelt is more than 33%, after expansion it should not reduce below 33%.	Greenbelt development after end of the plan period which is more than 33%. It is a running Mines and in approved mining plan it has been indicated for year wise reclamation. Accordingly it is being done. Also Financial assurance has been submitted to the Regional Controller of Mines, IBM, Bhubaneswar for this purpose
Point-7 :	The project proponent should have satisfactorily complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/consultation proceedings and also the commitments given while granting previous expansion, as may be applicable. This shall be duly recorded in the certified compliance report issued by the IRO/CPCB/SPCB, which should not be more than one year old at the time of submission of application.	The condition stipulated in existing EC has been complied with satisfactorily issued raised in public hearing included education, employment and medical facility etc., and action plan for address the issue was prepared for a period of 5 years. A certified compliance report from MoEF & CC, IRO has been obtained vide File No.109-93, dated 10.06.2022.
Point-8 :	Public Consultation shall be undertaken (if applicable as per table below) by obtaining response in writing, as per para 7 III (ii) (b) of EIA Notification 2006, except those category of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments.	Not Applicable. Project Submission under MoEF & CC OM dated 11th April 2022, clause7(ii) (a) of EIA notification 2006, for 40% Expansion.
Point-9 :	Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	All conditions are complied and effluent monitoring and air quality monitoring photographs are attached.

22. **Location and Connectivity:** The Raikela & Tantra mining lease area is located in village Raikela & Tantra of Bonai Sub-division in Sundergarh District and is easily accessible from Tensa town, which is at a distance of 0.7km connected through public motorable road. The ML area is covered under the SOI toposheet No. 73 G/1 and has the following coordinates - Latitude- 21°52' 18.98232" to 21° 53' 00.94342" N Longitude - 85°10' 43.37875"to 85° 11' 05.86014" E. The nearest rail head are Barsuan (17 km) and Roxy (40 km) in SE. The nearest National Highway and State Highway roads are NH-215 (Panikoli-Rajamunda) at 6.6 km NE and SH-10 (Koida Barsuan Road) at 0.16 km SW. The nearest airport is Biju Patnaik International Airport at 191 km SE. Nearest water bodies are Karo Nala at 0.1km in SE. Sarkanda Nadi at 4.71km in S. There are no National parks, Wildlife Sanctuary, Biospheres reserves within 10 km radius. There are four Reserve Forest within 10km radius Sarkanda R.F. 1.54 km S, Kathamala R.F. 6.61km NE, Torha R.F. 2.38 km N, Bhabani Pahar R.F. 5.74 km E. There is presence of Schedule-I species like Elephant in the study area.

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23. **Topography:** The ML exhibits undulating hilly topography varying from 620 m AMSL on the southern part to 840 m AMSL on the northern part of the ML area. Out of the total 49.372 ha 48.632 ha is of forest land and balance 0.740 ha is of non-forest land. An area of 46.165 ha has already been utilized due to the mining and ancillary activities. The topography of the study area (10 km around the ML boundary) exhibits plain as well as hilly topography. The general gradient of the area is towards north. Study area shows plain topography towards eastern side whereas northern, southern and western side of the study area shows undulating topography.
24. **Drainage:** The area falls within the Baitarini river Basin and watershed of the Karo nala which flows at a distance of 0.1km on the southern side of the ML area. There is no perennial streams/nalas flowing across the ML area. Drainage system of the study area exhibits dendritic pattern. The Karo nalla which flows at a distance of 0.1 km is the principal drainage system of the area and it finally drains into Baitarini River.
25. **Seismicity:** The project is under very feeble to Moderate Risk Zones (Zone-III). The project area is not prone to floods, landslides or cloudburst etc.
26. **Baseline study:** Baseline data was collected during winter season from Dec. 2020 to Feb. 2021.
- a) **Ambient Air Quality:** The project is an expansion project, and the study area is scattered with rural area. The area has cluster of Iron mines. The monitored results show PM10 levels were in the range of 25 µg/m<sup>3</sup> to 82µg/m<sup>3</sup>, PM2.5 levels were in the range of 12 µg/m<sup>3</sup> to 46 µg/m<sup>3</sup>, SO<sub>2</sub> levels were in the range of 4.1 µg/m<sup>3</sup> to 10.2 µg/m<sup>3</sup>, NO<sub>x</sub> levels were in the range of 9.1 µg/m<sup>3</sup> to 23.2 µg/m<sup>3</sup>& CO remained below detection level which are well within the prescribed limit of Central Pollution Control Board.
  - b) **Noise Quality:** The noise levels were measured at eight stations in core and buffer zone located in residential areas. The noise levels observed during day time varies from 64.3 to 31.9 dB(A) and at night time varies from 45.9 to BDL<30 dB(A). All the noise values observed are well within the limits prescribed by National Ambient Air Quality Standards for Noise.
  - c) **Surface water quality:** The physio-chemical characteristics of surface water were analyzed. In fresh water, the pH values of are varies from 7.3 to 7.82, the dissolved solids are 96 to 106 mg/l, chlorides are 30.2 to 36.4 mg/l, fluorides are 0.23 to 0.32 mg/l, Sulphate 15.6 to 26.2 mg/l respectively. The MF technique involves direct plating for detection and estimation of total coliform densities. The total coliform density in fresh water are varies from 79-97 MPN/100 ml, which are within the limit as per IS-2296, for surface water quality.
  - d) **Ground water quality:** The physio-chemical characteristics of ground water samples were analyzed. The levels of total dissolve solids varied from 132-219 mg/l, total hardness from 124-152 mg/l, chloride from 24.7-39.2 mg/l, Sulphate from 19-43 mg/l and alkalinity from 97-135 mg/l.
  - e) **Soil quality:** Top soil samples were collected from core & buffer zone, from four locations. From the above analysis report, it is found that the bulk density ranges between 1.12 to 2.24 g/cm<sup>3</sup>. The soil texture is almost clayey. The soil is very much fertile for agriculture purpose.
27. **The land utilization plan:** The mine lease area is spread over 49.372 Ha. The land utilization plan is given below.

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Sl. No.	Type of land use	At the beginning of plan period (in ha.)	At the end of plan period (in ha.)
1.	Mining	29.73	32.40
2.	Mineral storage	2.61	4.64
3.	Roads	2.05	2.62
4.	Infrastructure (Workshop, Administrative building etc.)	0.13	0.27
5.	OB/waste dump	6.13	8.34
6.	Top soil preservation	0.00	0.00
7.	Greenbelt	2.989	1.03
8.	Others	5.731	0.07
	<b>Total</b>	<b>49.37</b>	<b>49.37</b>

**28. Production and waste generation:**

Sl. No.	Year	Pit ID	Total Topsoil Volume (m <sup>3</sup> )	Total Over Burden Volume (m <sup>3</sup> )	Total Over Burden Quantity (t)	Total ROM Volume (m <sup>3</sup> )	Total ROM Quantity (t)
<b>Phase I - 20% Increase</b>							
1	2022-2023	Joint Mining Pit	0.00	19847.70	39695.40	386720.53	1121489.52
2		Raikela & Tantra Pit	0.00	220.42	440.84	386720.53	117010.48
3	2023-2024	Joint Mining Pit	0.00	3523.01	7046.02	149447.89	415465.14
4		Raikela & Tantra Pit	0.00	47550.90	95101.80	821775.13	2284534.86
<b>Phase II - 40% Increase</b>							
5	2024-2025	Joint Mining Pit	0.00	19931.97	39863.94	62167.53	167852.34
6		Raikela & Tantra Pit	0.00	106965.37	213930.74	1023708.84	2856147.66
7	2025-2026	Joint Mining Pit	0.00	12637.98	25275.96	271985.59	775158.94
8		Raikela & Tantra Pit	0.00	64175.57	128351.14	780847.59	2248841.06
<b>Total</b>			<b>0.00</b>	<b>2,74,852.92</b>	<b>5,49,705.84</b>	<b>38,83,373.63</b>	<b>99,86,500.00</b>

**29. Mining method:** Mechanised opencast mining method with large HEMM will be carried out to increase the production from a level of 2160000 T to 3024000 T. Further the mining operations is now proposed to be on 3 shift basis as against 2 shifts joint mining was earlier proposed along the northern boundary with Jindal Steel Power Ltd. joint mining along the common boundary is now being proposed with National Enterprises and Korp Resources Pvt. Ltd. and Gitarani Mohanty Necessary permission will be obtained. Life of Mines is estimated as 10.45 years.

**30. Waste Generation and Management:** Waste dump already reclaimed technically and biologically. This dump area is already proven barren by drilling. This dump has waste materials which are of grade below 45% Fe of laterite, shale, BHJ, BHQ, etc. This dump is already reclaimed by coir matting and subsequently plantation has been done surrounded by retaining

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wall of 1.5m height & 1m width and garland drain. Any rain cut which may develop in dump slope is proposed to be checked by no. of small check dams. Garland drains at the toe of the dump is connected to settling tank. Backfilling has already been initiated and till now 2.820 ha area has already been backfilled with waste material after proving the area as barren by putting bore holes. Retreating method is adopted for backfilling. During the futuristic mining activity, tentatively out of the total waste 40% of waste material shall be utilized for road maintenance purpose and balance 60% shall be used for backfilling covering an area of 5.874 ha till the conceptual period. The reclamation plan as envisaged during the next five year till 2025-26 shall be as follows:

Sl. No.	Year	Waste Generation (Cub M)	Utilization		Backfilling Area (Sq.M)	Surface Level (Top RL/Bottom RL)
			Road Maintenance (Cub M)	Backfilling (Cub M)		
1.	2021-22	192875	67506	125369	8226	715/700
2.	2022-23	192900	67515	125385	8300	730/700
3.	2023-24	203575	71251	132324	15635	737.5/700
4.	2024-25	235725	82504	152221	18429	7745/700
5.	2025-26	257150	90002	167148	18902	752.5/700
<b>Total</b>		<b>1082225</b>	<b>378778</b>	<b>703447</b>		

31. **Water requirement:** About 348 KLD water will be required for dust suppression, plantation, workshop & wheel wash, drinking & domestic activities, etc. Mine pit water will be used for dust suppression and plantation activities. Ground water from bore well will be used for drinking and domestic use. Necessary permission from CGWA and permission for drawl of surface water from Karo Nala obtained.
32. **Wastewater management:** Wastewater & sanitary sewage from domestic use in the mine site is being discharged to septic tank followed by soak pit and in no circumstances discharged to any water body. There will not be any garage with washing facility within the leasehold area and hence the chance of generation of effluent from workshop does not arise.
33. **Power Requirement:** A total of 533 KVA power is required for mining operation. Power supply will be drawn from WESCO.
34. **Flora/Fauna:** Within core zone 20 species of trees, 4 species of shrubs, 3 species of climbers and 2 species of grasses are present. Common native species such as Arjun, Bel, Char, Kendu, Jamun, Neem, Palas, etc. are also present in the core area. Avifaunal species found are House Crow, House Sparrow and Pigeon etc. Mammals found are squirrel, cat, mongoose and rat. Reptiles reported are krait and rat snake. Only one Schedule I species found namely Elephant.
35. **Green belt:** Schedule planned for green belt development to be checked after every year and any alternation required will be implemented. Post plantation status will be regularly checked in every season. Plantation will be undertaken over the life of mine in a phase wise manner. The plantation will start from the first year of mining. Total existing plantation in 5.925ha, area and proposed plantation area will be 3.445 ha. And 5515 tree will be planted over 5 year of plan period.
36. **Manpower:** The estimated total manpower requirement (direct or indirect) for the mining project is 442 persons (221 persons for phase-I and 221 persons for phase-II).
37. **Project Cost:** The expected cost of the project is Rs. 47.19 crores.

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38. **Environment Consultant:** The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee.

39. The SEAC in its meeting held on dated 19-06-2023 recommended the following:

- A. Only 20% increase in production capacity may be considered in first phase under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022 and after successful compliance to phase-I, rest 20% increase in production capacity will be considered under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022.
- B. Final EIA/EMP report may be prepared on the basis of standard TOR as per MoEF&CC, Govt. of India OM dated 11th April 2022 and also public hearing may be exempted as per the said OM dated 11th April 2022.
- C. Following may be included in the final EIA/ EMP report:
  - i) Traffic Study Report vetted by reputed institute.
  - ii) Whether mining activity has been carried out in safety zone or has maintained the safety zone area of 7.5 metres surrounding the mining activity zone?
  - iii) Layout map of Overburden and current status of different grades of mineral rejects.
  - iv) Comparative tabulated form between present magazine management and proposed plan due to expansion.
  - v) A brief note on FMCP.
  - vi) Chemical analysis report of the ore.
  - vii) Status of implementation of Site-Specific Conservation Plan.
  - viii) RL of ground water level during summer and rainy season as well as RL of surface post mining as per the approved mining plan
  - ix) Contents of chromium, manganese and heavy metal elements in the ground water samples of EIA study area.
  - x) Green belt area is getting reduced. Does not look like 33% as stipulated in point No. 6 of Eligibility of the Project under clause 7(ii) "a": This shall be clarified with detailed calculation of greenbelt existing and proposed.

40. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Traffic Study Report vetted by reputed institute.	Traffic study report has been attached as Annexure-A	Traffic Study Report vetted by Odisha University of Technology and Research.
2.	Whether mining activity has	The total Mining lease area is 49.372 Ha and out of which 48.632 Ha is Forest Land (Khesra Forest: 7.936 Ha and DLC Forest is	-

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Environmental Scientist (SEAC)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent			Views of SEAC
	been carried out in safety zone or has maintained the safety zone area of 7.5 metres surrounding the mining activity zone?	<p>40.696 Ha); out of 48.632 Ha of Forest Land 3.047 Ha is Safety Zone Area.</p> <p>The User Agency has obtained Forest Clearance (Change in Land Use From Safety Zone Purpose to Mining Purpose) over an area of 0.218 Ha vide letter No. F.No. 8-23/2007-FC, Dt. 10.07.2020 from MoEF &amp; CC and after obtaining all statutory clearance, the joint Mining work has been started from 2022-23 with TRB Iron Ore Mines of M/s. Jindal Steel &amp; Power Ltd, Tensa, Sundargarh.</p> <p>So the Balance Safety Zone Area is now available of 2.829 Ha.</p> <p>Out of which the User Agency has applied One proposal vide proposal No. FP/OR/REDIV/430002/2023, Dt. 20/05/2023, has been submitted for change in Land Use Pattern from Safety Zone Purpose to Mining Purpose (Cluster Mining with Korp Resources Pvt Ltd, National Enterprises and (Gitarani Mohanty) over an area of 1.1594 Ha.)</p> <p>Out of which the User Agency has applied another proposal vide proposal No. FP/OR/REDIV/431319/2023, Dt. 30/05/2023 for change in Land Use Pattern from Safety Zone Purpose to Mining Purpose (Around Explosive Magazine) over an area of 0.636 Ha.</p> <p>So the Balance Safety Zone Area of 1.0336 Ha will be maintained as Safety Zone.</p>			
3.	Layout map of Overburden and current status of different grades of mineral rejects.	Lay out Plan/Surface Plan of Overburden and current status of different grade of mineral rejects stocks is enclosed herewith as Annexure-B.			Surface plan showing 2 temporary mineral rejects stock 1 of grade +45-51% Fe and temporary mineral rejects stock 2 of grade +51-55% Fe.
4.	Comparative tabulated form between present magazine management and proposed plan due to expansion.	Sl No.	Present Magazine Management Plan	Proposed Magazine Management Plan Due to Expansion	
		1.	Now the User Agency has engaged authorized agency (Out sourcing) to conduct blasting along with explosive under the	As the nature of ore is soft and the quarry will go down gradually. So blasting requirement will be less, So the same practice by	

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent			Views of SEAC
			supervision of Mines Manager in accordance of the terms & condition of Explosive Act'1983	engaging authorized agency (out sourcing) to conduct blasting along with explosive under the supervision of Mines Manager in accordance of the terms & condition of explosive Act'1983.	
5.	A brief note on FMCP.	A brief summary of FMCP has attached as Annexure – C.			complied
6.	Chemical analysis report of the ore.	Chemical analysis report of Iron Ore is enclosed herewith as Annexure – D.			complied
7.	Status of implementation of Site-Specific Conservation Plan.	Certificate from Divisional Forest Officer is attached as Annexure- E.			Site-Specific Conservation Plan approved on dated 13.04.2010 with financial outlay of Rs.173 lakhs with implementation period of 10 years from 2019-20 to 2028-29.
8.	RL of ground water level during summer and rainy season as well as RL of surface post mining as per the approved mining plan	RL of ground water level during summer season: 587 m. RL of ground water level during rainy season: 591 m. RL of surface post mining as per the approved mining plan: 640 m.			-
9.	Contents of chromium, manganese and heavy metal elements in the	Contents of Chromium :< 0.002 mg/l which is less than acceptable limit (0.05 mg/l). Manganese: 0.014 to 0.024 which is also less than acceptable limit (0.1 mg/l) All the heavy metal elements analysed are under			-

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*Jayak*  
Environmental Scientist (SEAC)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC																								
	ground water samples of EIA study area.	permissible or acceptable limit. Ground water analysis result is summarized in EIA report (Chapter-3, Section-3.10.1.3).																									
10.	Green belt area is getting reduced. Does not look like 33% as stipulated in point No. 6 of Eligibility of the Project under clause 7(ii) "a": This shall be clarified with detailed calculation of greenbelt existing and proposed.	<p>The total Mining Lease Area is 49.372 Ha. and out of which 48.632 Ha. is Forest Land (Kheshra Forest : 7.936 Ha. and DLC Forest is 40.696 Ha.); out of 48.632 Ha. of Forest Land 3.047 Ha. is safety Zone Area.</p> <p>The User Agency has obtained Forest Clearance (Change in Land Use From Safety Zone Purpose to Mining Purpose) over an area of 0.218 Ha. vide Letter No. F.No.8-23/2007-FC, Dt. 10.07.2020 from MoEF &amp; CC and after obtaining all statutory clearance, the Joint Mining work has been started from 2022-23 with TRB Iron Ore Mines of M/s. Jindal Steel &amp; Power Ltd, Tensa, Sundargarh. So the Balance Safety Zone area is now available of 2.829 Ha. Out of which the user Agency has applied one proposal vide proposal No. FP/OR/REDIV/430002/2023, Dt. 20/06/2023 has been submitted for change in Land Use Pattern from Safety Zone Purpose to Mining Purposes (Cluster Mining with Korp Resources Pvt Ltd, National Enterprisers and Gitarani Mohanty) over an area of 1.1594 Ha.</p> <p>Out of which the user Agency has applied another proposal vide proposal no. FP/OR/REDIV/431319/2023, Dt. 30/05/2023 for change in Land Use Pattern from Safety Zone Purpose to Mining Purpose (Around Explosive Magazine) over an area of 0.636 Ha. So the Balance Safety Zone Area of 1.0336 Ha will be maintained as Safety Zone. But now the Green belt is available is 2.829 Ha as safety zone area and the Dumping and Back-filled Area is 4.125 Ha. As per approved mining plan every year 0.689 HA land will be covered as green belt. Post Mining the entire area will be covered as green belt. Also the User Agency has submitted a bank guarantee of 2,46,86,000.00 to IBM, Bhubaneswar. Also the Project Proponent has amended in the Lease Deed for re-grassing the entire area i.e 49.372 Ha.</p> <table border="1"> <thead> <tr> <th>Type of land use</th> <th>At the end of conceptual period (in ha)</th> <th>Post Mine Land Use</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Mining</td> <td>32.40</td> <td>Plantation</td> <td>Shall be carried out</td> </tr> <tr> <td>Mineral storage</td> <td>4.64</td> <td>Plantation</td> <td>Shall be carried out</td> </tr> <tr> <td>Roads</td> <td>2.62</td> <td>Plantation</td> <td>Shall be carried out</td> </tr> <tr> <td>Infrastructure (Workshop, Administrative building etc.)</td> <td>0.27</td> <td>Plantation</td> <td>Shall be carried out</td> </tr> <tr> <td>OB/waste dump</td> <td>8.34</td> <td>Plantation</td> <td>Shall be carried out</td> </tr> </tbody> </table>	Type of land use	At the end of conceptual period (in ha)	Post Mine Land Use	Status	Mining	32.40	Plantation	Shall be carried out	Mineral storage	4.64	Plantation	Shall be carried out	Roads	2.62	Plantation	Shall be carried out	Infrastructure (Workshop, Administrative building etc.)	0.27	Plantation	Shall be carried out	OB/waste dump	8.34	Plantation	Shall be carried out	-
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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent				Views of SEAC
		Top soil preservation	0.00	Road		
		Greenbelt	1.03			
		Others	0.07		Done	
		<b>Total</b>	<b>49.372</b>			
<b>Table- Land use breakup (Justification for Green Belt)</b>						
SL no.	Description	Area in ha During 2022-23	Area in ha During 2023-24	Area in ha During 2024-25	Area in ha During 2025-26	Area in ha During 2036-37 (End of Life)
1	Safety Zone Area along M L Boundary	2.193	2.193	1.0336	1.0336	1.0336
2	Safety Zone Area around Explosive Magazine	0.636	0.636	0.000	0.000	0.000
3	Stabilized OB Dump	2.275	1.945	1.945	1.945	2.275
4	Plantation in Back-filled of Excavated Area	1.850	2.450	3.050	3.650	42.3074

Considering the information furnished and the presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance only for 20% increase in production capacity (i.e. from 2.16 MTPA to 2.592 MTPA) in first phase under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022 with stipulated conditions as per Annexure – A and following specific conditions and after successful compliance to phase-I, rest 20% increase in production capacity (i.e. from 2.592 MTPA to 3.024 MTPA) will be considered under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022.

- i) The project proponent needs to preserve or utilize the ore and fine's containing Fe between 35-45%, following IBM guidelines.
- ii) The project proponent shall maintain adequate greenbelt in the lease area.
- iii) OB dump sites shall be managed properly as proposed.
- iv) The additional fines generated due to proposed enhancement shall be managed properly.

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- v) Proper Air Pollution Control measures shall be provided to control dust emission and local dust generation.
- vi) 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.
- vii) Traffic management shall be done as per recommendation of Traffic Management Study Report duly vetted by institute of repute.
- viii) As a part of six-monthly compliance, the PP shall submit the status of Tailing Pond and its annual make-up to ascertain its capacity to take care of expansion in production including mineralogical & chemical analysis of excavated ore, dump materials and rejects. Also, actual layout after expansion may be submitted as a part of six-monthly compliance to the SEIAA, Odisha and Regional Office, MoEF&CC, Govt. of India, Bhubaneswar.
- ix) Adequate measures shall be adopted for management of noise, vibration and fly rocks.
- x) Bench and dump slopes are to be designed and maintained so that their failure is avoided.

### **ITEM NO. 03**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. MAA PARTHIBI TRADERS FOR SEMELIA STONE QUARRY OVER AN AREA OF 10.117 HA FOR PRODUCTION OF 11,400 C.UM/ANNUM AT KHATA NO. 01, PLOT NO. 1195 (P) & 1196 (P), VILLAGE SEMELIA, TEHSIL-LAKHANPUR, DISTRICT- JHARSUGUDA OF SRI SATYANDRA KUMAR CHANDRA – EC**

1. This proposal is for Environmental Clearance of M/s. Maa Parthibi Traders for Semelia Stone Quarry over an area of 10.117 ha for production of 11,400 c.um/annum at Khata no. 01, Plot no. 1195 (P) & 1196 (P), village - Semelia, Tahasil- Lakhanpur, District- Jharsuguda of Sri Satyandra Kumar Chandra.
2. **Category:** As per the EIA notification 2006 and its subsequent amendment, proposed project fall in category B schedule 1(a)-Mining of Minerals.
3. **Project details:** This is a new Stone Quarry over an area of 10.117ha and not coming under DLC land that is certified from the concerned DFO. For the production of 11,400 Cum per year for a period of Concession of 5 years the mining Plan for the Proposed Project has been approved by Deputy Director of Geology Authorized officer, O/o Joint Director Geology, Zonal Survey, Sambalpur , Vide Letter No 624/ZS Dated 13.04.2021
4. The proposed mine lease has been granted to Tahasildar Lakhanpur. In turn, Semelia Stone Quarry area has been allotted to M/s Maa Parthivii Traders by the Tahasildar Lakhanpur, Jharsuguda, Odisha vide letter no 1643 dated 17.03.2020.
5. **TOR details:** Terms of Reference (TOR) has been prescribed by SEIAA, Odisha, vide letter no.1815/SEIAA for quarry dated 26.07.2021.

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*J Nayak*  
Environmental Scientist (SEAC)

6. **Public hearing details:** The Public Hearing has been conducted on 12.07.2022 at Semelia Village Tehsil Lakhanpur in Jharsuguda District, of Odisha under the supervision of Addl. District Magistrate, Jharsuguda. The issues raised in public hearing are agriculture, threat to surface and ground water, development of school/college, proposal of check dam on river.
7. **Location and connectivity:** The proposed Semelia Stone Quarry comes under the village Semelia, Tehsil-Lakhanpur, District- Jharsuguda, in the State of Odisha on Khata No. – 01, Plot No. – 1195(P)& 1196(P), covered in the Survey of India Topo Sheet No. F44R6. Geographically the ML area extends from 83°26'42.16"E to 84°26'53.42"E and 21°40'28.93"N to 21°40'39.30"N. with a highest elevation of 195mRL and the lowest elevation 189 mRL. Nearest Railway Station is Kotarlia Railway Station at a distance of 23.00 km in NE; Nearest Airport is Raipur Airport (Chhattisgarh) at 188 Km in NE; Nearest Highway is NH-200 is at a distance of 11.0 Km in N Direction; Nearest Sanctuary is Debrigarh Wild life Sanctuary is situated 8.2 kms in SE; nearest Reserve Forest is Holsari Dungri RF and Dechua RF are present with in the study at a distance of 8.0 Kms in SE ; Nearest Water Body is Mahanadhi River, approx. 0.5Km. in S direction.
8. **Seismicity of Area:** The project site falls under seismic zone II which is a least active zone (MSK VIII). The IS code assigns zone factor of 0.24 for zone II as shown in the seismic zonal map of India.
9. **Topography and drainage:** The North –Western part of the district is mainly hilly. About 80 % of the area is characterized by isolated hillocks and rounds and undulating plains. A part of Hirakud reservoir occupying 185 sq. km is present in southern part of the district. The highest and lowest topographic elevation of the district are 474 metre and 193 metre respectively. The drainage of the district is controlled by the Mahanadi in the western part and Ib river, a tributary of the Mahanadi in the central and eastern part. The drainage pattern is mainly dendritic and high drainage density is found in the western part of the district. The ML area is Stony Barren Land having with flat terrain. The highest elevation of the mine lease area is 195 mRL and minimum Elevation is 189 mRL. The proposed project does not impact natural drainage pattern of the area.
10. **Reserves:** Total Geological Reserves are estimated to be 1029344 Cu.m while Total Mineable Reserves are 486200.5 Cum

Category	Section considered	Cross sectional Area of Rock Mass (m <sup>2</sup> )	Length of influence in (m)	Vol. of rock Mass(m <sup>3</sup> )	Vol.of Waste Rock Mass (5%) (m <sup>3</sup> )	Vol. of usable Rock Mass (95%) (m <sup>3</sup> )
		A	B	C=AXB	D=CX0.05	E=CX0.95
1 <sup>st</sup> year	X-X'	90	120	10800.0	540.0	10260
2 <sup>nd</sup> year	X-X'	90	120	10800.0	540.0	10260
3 <sup>rd</sup> year	X-X'	95	120	11400.0	570.0	10830
4 <sup>th</sup> year	X-X'	100	120	12000.0	600.0	11400
5 <sup>th</sup> year	X-X'	100	120	12000.0	600.0	11400
TOTAL				57000	2850	54150

The average production during plan period= 11400 m<sup>3</sup>Per annum

11. **Mining Method:** Mining will be carried out by opencast semi-mechanized method without drilling & blasting. The proposed machinery that are deployed during mining activity are Excavator, Rock breaker, trucks/ tipper Water carrier etc. will be used by manual labors for sorting & sizing. In order to prevent haphazard excavation of pits and suitable blending of ore, the excavation has

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been proposed at one place. The excavated rock mass will be loaded in to 10 t capacity of trippers or truck by excavator. The development of the quarry will be carried out by benching pattern, the minimum height of the bench will be 2 mts. The overburden generated will be 5% of the excavated rock mass that is 2850 Cum. the waste generated will be disposed away from the lease area before the waste comes in contact with dam Water in monsoon.

12. **Waste generation:** About 540 Cum to 600 Cum of Waste will be generated every year (and about 2850 Cum of waste will be generated during the plan period. Temporary Dumps over an area of 0.020 ha has been proposed on the North-Eastern part of the lease area. The height of the dump shall not exceed 6 m. The amount of waste generated shall be kept within the lease area for a very short period of time and shall be used for road construction and maintenance from time to time each year.

Category	Section considered	Cross sectional Area of Rock Mass (m <sup>2</sup> )	Length of influence in (m)	Vol. of rock Mass(m <sup>3</sup> )	Vol.of Waste Rock Mass (5%) (m <sup>3</sup> )
		A	B	C= A×B	D= C×0.05
1 <sup>st</sup> year	X-X'	90	120	10800.0	540.0
2 <sup>nd</sup> year	X-X'	90	120	10800.0	540.0
3 <sup>rd</sup> year	X-X'	95	120	11400.0	570.0
4 <sup>th</sup> year	X-X'	100	120	12000.0	600.0
5 <sup>th</sup> year	X-X'	100	120	12000.0	600.0
TOTAL				57000	2850

13. **Water requirement:** Water requirement Total water requirement for the mining project is 6.7 or 7.0 KLD. This water will be supplied from the nearby village through hired tankers.

14. **Greenbelt:** About 881 no. of Plants will be planted in 0.551 Ha of the Safety zone, 610 No. of Plants will be planted in the unmined out area within the mine lease. 300 no. of plants on both sides of the approach road with 2mts spacing and 500 No. of plants within the nearby village will be planted in consultation with Forest Department and Village Local Authorities. About 2290 number of trees will be planted in first two years of the mining. Plantation will be done with suitable local species like Teak, Mango, Neem, Jammun, Jhaun etc after consultation with the local authorities.

Year	Total Plantation	Plantation in safety barrier zone and unmined out area (0.551 Ha+0.381 Ha=0.932Ha)	Plantation along approach road of length 0.3 km	Plantation in village consulting local authorities
1 <sup>st</sup>	1281	880	150	250
2 <sup>nd</sup>	1010	610	150	250

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3 <sup>rd</sup>	Maintenance	Maintenance	Maintenance	Maintenance
4 <sup>th</sup>				
5 <sup>th</sup>				
Total	2290	1490	300	500

15. **Employment Potential:** Besides the direct and indirect employment to 27 persons, the company will provide vocational skill training to the unemployment youth of the neighbouring villages through outside agencies. Local villagers residing in the nearby villages shall be employed as semi-skilled workers.

16. **Project cost:** The estimated project cost is about Rs. 50 lakhs. About Rs. 1.0 lakh/annum has been kept under CER budget for development works in village. About Rs. 9.7 lakh (capital cost) & 5.5 lakh/annum has been allocated as EMP budget

S.No.	Particulars	Amount (Lakh)	
		Capital	Recurring
1	Dust Suppression	3.0	0.5
2	Plantation and its protection (@ Rs. 200/sapling including fencing)	4.6	1.6 ( Rs 300/- per Person* 2 Persons for 270 Days)
3	Personal Protective Equipment (@ Rs. 2000/PPE kit)	0.5	0.5
4	Environmental Monitoring (Air, water, soil, noise)	-	1.2 (0.5 lakh, 0.4 lakh, 0.20 lakh, 0.10 lakh)
5	Garland drain & settling tank	1.0	0.5
6	Haul road construction/ maintenance (Approach road, approx. 0.3km)	0.6 (@ Rs 2.0 Lakh/km)	1.2 (@ Rs. 300*200 days* 2 labor)
	<b>Total</b>	<b>9.7</b>	<b>5.5</b>

Sl. No.	Activity	Capital Cost (in Rs.)
1.	Financial aid for the construction & maintenance of roof wall and painting of school of Semelia village	40,000
2.	Project Proponent will help Village Authorities of Semelia during constructing the check Dam	60,000
<b>TOTAL</b>		<b>1,00,000</b>

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*J. Nayak*  
Environmental Scientist (SEAC)

17. **Environment Consultant:** The Environment M/s P & M Solution, Noida along with the proponent made a presentation on the proposal before the Committee on 12.06.2023.

18. The SEAC in its meeting held on dated 12-06-2023 decided to take the decision on the proposal after receipt of the following from the proponent.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	RL of mining area (Pre and post mining as per the approved mining plan), agricultural field and RL of the ground water table in summer season and monsoon season.	RL of Mining area – 193m(Pre mining) & RL of agricultural field – 191m (average) RL of groundwater table During Summer – 178m to 180m During Monsoon – 183m to 185m	complied
2.	Silt and dump management taking into consideration of RL in mining area, agricultural fields and water bodies.	The excavation process will be managed manually, ensuring that agricultural land remains unaffected due to the absence of drilling and blasting activities. Moreover, we will implement water sprinkling along the transportation road and within the quarry area to effectively control dust emissions.	complied
3.	SOP for control of dust and noise.	There are no proposals for drilling, blasting, or the use of any machinery as per the approved mining plan. Excavation will be carried out solely using hand-held rock breakers. As a result, the emission of dust is minimal. Nevertheless, any emitted minute dust particles will be mitigated through water sprinkling.	complied

Considering the information furnished and the presentation made by the consultant, M/s P & M Solution, Noida along with the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per Annexure – B and following additional conditions;

- i) An Undertaking by the lessee not to use wagon drilling blasting to be submitted. Accordingly, specific condition to be stipulated in EC of individual lease.
- ii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983 shall be ensured by the lessee. An undertaking to this effect shall be submitted by the lessee. Accordingly, specific condition to be stipulated in EC of individual lease.
- iii) An undertaking to obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water. Accordingly, specific condition to be stipulated in EC of individual lease.

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- iv) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.
- v) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.
- vi) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the Annexure – C.
- vii) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

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

#### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR SIRIGIDA SAND QUARRY (ML AREA 7.28 HA) FOR PRODUCTION OF 10700 CUM/ANNUM OF RIVER SAND IN BRAMHANI RIVERBED AT VILLAGE – SIRIGIDA, TAHASIL –TALCHER, DISTRICT- ANUGUL, SMT SANGHAMITRA BHUTIA - EC**

1. This proposal is for Environmental Clearance of Sirigida Sand Quarry (ML Area 7.28 ha) for production of 10700 Cum/annum of River Sand in Bramhani River Bed at village – Sirigida, Tahasil –Talcher, District- Anugul, Smt Sanghamitra Bhutia.
2. **Category:** As per EIA Notification, 2006, and subsequent amendments, the project falls under category B1 of Schedule 1(a) - Mining of minerals as the lease area is more than 5.0 Ha.
3. The mining lease of Sirigida Sand Quarry has been granted to Smt. Sanghamitra Bhutia , resident of village - Sirigida, Tahasil - Talcher, Anugul, being successful bidder, vide letter no-4610, dated 20.11.2020 from Tahsilidar cum-Competent Authority, Talcher Odisha for a lease period of 5 (five) years.
4. The Mining Plan is approved vide memo no 1454 on dated 21.05.2020 by the Joint Director Geology, Zonal Survey, Dhenkanal. The mining plan has prepared as per OMMC, 2016 by the RQP, Sri B. B Khandual, (Regn.No.RQP/OD/049/2016), for the plan period 2020-2025.
5. The preparation of district survey report of river sand mining in Anugul district has been prepared in accordance with Clause II of Appendix X of the notification and New Sairat source namely Sirigida Sand Quarry of Khata No.142, PI. No.1791 area of 18Ac. has been included.
6. **TOR details:** Terms of Reference (TOR) was issued by State Impact Assessment Authority (SEIAA) Orissa, Vide Letter. No.58822/106-MINB1/02-2021; 08.07.2021 for Sirigida Devi River Sand Quarry.
7. **Public hearing details:**The public hearing meeting was held on 27.04.2022 at 11:00 am at Sirigida Yatra Padia of Talcher Tahsil of Anugul district. Issues raised are dust suppression and water pollution control, afforestation programme, local employment opportunity, provision for repair and maintenance, strict adherence of sand mining guidelines of village roads. Budget earmarked for action plan of public hearing is 16.10 lakhs.

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8. **Location and connectivity:** Sirigida Sand Quarry over an area of 18.00 acres or 7.28 ha is in village Sirigida, Tahasil - Talcher in Angul district of Odisha. The proposed project activity will be carried out on the dry river bed of the Brahmani river. The lease area is bounded by Latitude  $21^{\circ} 00'46.07''$  N to  $21^{\circ} 00'55.79''$  N & Longitude  $85^{\circ} 13'19.56''$  E to  $85^{\circ} 13'32.80''$  E in Plot No 1791 & Khata No 142. It is a part of the area covered in the Survey of India Toposheet No. 73G/4. The lease area is approachable about 1.41 km from Kulei-pitiri Road. The nearest railway station is Scottaland Railway station at a distance of 3.72 Km and Talcher Railway station is at 9.28km. There is no existence of public road and railway line within the lease area. The nearest airport is Biju Patnaik International Airport, Bhubaneswar at a distance of 95 km. Nearest National Highway is NH-149 is ~3.98 Km and NH-53 is 8.53 km away from the ML area. Talcher town is at 6.73 kms.
9. **Reserves:** As estimated, geological reserve of sand is 151082cum and mineable reserve is 74289cum. During the plan period, a total of 53,500cum sand will be extracted.
10. **Method of mining and production:** The total lease area is 7.28 ha. of Govt. land at village Sirigida under Talcher Tahasil of Angul District, Odisha. The method of mining is open cast manual. Total Production for plan period of five years is 53,500 cum and annually 10700cum sand will be mined out. The bench height will be 1.0m and width will be along the base of deposit. The average thickness of the deposit is 1.0m. It is proposed to transport of sand is by Tractors/tractor trolley of 8-10 tonnes capacity.
11. **Baseline study:** Baseline study was carried out during period Dec 2021 to February 2022,
12. **Air quality monitoring -**  $PM_{10}$  ranges within  $71.8-38.1 \mu\text{g}/\text{m}^3$ ,  $PM_{2.5}$  ranges within  $39.0-13.5 \mu\text{g}/\text{m}^3$ ,  $SO_2$  ranges within  $7.5-4.1 \mu\text{g}/\text{m}^3$  &  $NO_x$  ranges within  $15.1-9.1 \mu\text{g}/\text{m}^3$ . The parameters monitored at the project area as per NAAQ standards are found to be within limits. It may be observed that the all parameters at all stations are well within the limits prescribed by Central pollution control Board.
13. **Noise quality monitoring –** During day time noise monitoring results ranged from 44.38 dB(A) to 53.38 dB(A) and in night time 35.43 dB(A) to 41.36 dB(A).
14. **Surface water monitoring –**The surface water results were compared with IS 2296:1992 standard and in respect of CPCB water Quality Criteria for designated best use. Based on comparison study of test results with Surface water Quantity Standards (IS 2296 Class A), it is interpreted that water qualities of studied locations are classified under Class E, which can be used for irrigation industrial cooling and controlled waste disposal. The pH value ranges from 6.92 to 7.56 and within the limits (6.5 – 8.5) of IS2296:1992. The sulphate content in the collected surface water ranges from 7.4 mg/l to 10.6mg/l. The chloride content in the collected surface water sample ranges from 12.4 mg/l to 19.3 mg/l. DO of the collected surface water sample ranges from 6.1 mg/l to 7.3 mg/l. BOD of the collected surface water sample ranges from 1 mg/l to 2.1 mg/l.
15. **Ground water monitoring –** Physio-chemical characteristics of ground water samples collected from the selected villages. The Ground water results were compared with drinking water standards (IS10500:2012). The ground water results of the study area indicate that the pH range varies between 6.82 and 7.7. It is observed that the pH range is within the limit of IS10500:2012. The Total Dissolved Solids range is varied between 92 mg/l – 122 mg/l for the

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ground water. All the samples are well within the permissible limit of IS 10500: 2012. The acceptable limit of the chloride content is 250 mg/l and permissible limit is 1000mg/l. The chloride content in the ground water for study area ranges between 1.4mg/l – 2.2 mg/l. It is observed that all are well within the permissible limit of IS10500:2012. The desirable limit of the sulphate content is 200 mg/l and permissible limit is 400mg/l. The sulphate content of the ground water of the study area varies between 1.4mg/l – 2.3 mg/l. It is observed that all the samples are within the permissible limit of IS 10500: 2012. Based on comparison study of test results with drinking water standard, it is interpreted that water qualities of studied locations meet with the drinking water standards as per IS 10500: 2012.

16. **Soil quality monitoring** - Soil Samples collected from 5 identified locations indicate the soil is Sand Loamy type The pH of the soil samples ranged from 6.23 to 7.15. Indicating that the soils are slightly acidic to moderately alkaline in nature. Nitrogen content ranged from 0.043 % to 0.082 %. Phosphorous ranged from 0.015 % to 0.034 %.
17. **Replenishment Study Report** - The estimations was done with three nos. of pits dug earlier of following dimensions i.e., pits of 10m x 10m x 2m, 12m x 12m x 2m, 12m x 12m x 2m made during pre-monsoon season to see what depth is filled up with sand after monsoon season, which was measured. The result shows that there is an average of 0.29 meter decrease in depth of pit, that means replenishment rate is 71 % (average). In Northern side of the Quarry Replenishment is found to be less (0.66 m) in comparison to Southern side (0.76m).

**Comparison between planned production with Replenished sand**

A	Area of Potential Sand Zone (in m <sup>2</sup> ) including safety zone	75541
B	Area of Potential Sand Zone (in m <sup>2</sup> ) Excluding safety zone	53574
C	Sand Thickness (in m)	1
D (AxC)	Geological Reserve in Cum	75541
E (BxC)	Minable Reserve in Cum	53574
F	Quantity Extractable after Replenishment in Cum	38038

18. **Water requirement:** The total water requirement will be approximately 5.0KLD for different purposes like domestic, dust suppression, plantation purposes. Water will be withdrawn from tube wells from nearby village.
19. **Power requirement:** No electrical power shall be required for operations as the mining will be worked out during day time only. Minimal power required for office shall be taken from the General Electric supply of the area. Dumpers, tractors will be used for transportation. So, the approximate quantity of the fuel used per day is 80 liter/day.
20. **Greenbelt:** It is proposed to plant 7500nos. of saplings during the plan period and a budget of Rs.3,10,000 Lakh has been proposed for plantation.
21. **Manpower:** Total manpower requirement is 17 nos. For supervisor & statutory person 1 no. of person, skilled laborers (operator & helper) 3 nos. of persons, semi- skilled laborers 3 nos. & unskilled laborer 10 nos.
22. **Project cost:** The estimated cost of the project is 25 lakhs. EMP capital cost is 16.10 lakhs and recurring cost is 6.15 lakhs/annum and CSR Budget 5 lakhs/annum.

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23. **Environment Consultant:** The Environment consultant M/sEHS360 LABS PVT. LTD., Chennai along with the proponent made a presentation on the proposal before the Committee on 17.02.2023.

24. The SEAC in its meeting held on dated 17-02-2023 decided to take decision on the proposal after receipt of the following from the proponent:

**A) The proponent may be asked to submit the followings for further processing of EC application;**

- i) RL values for Pre-monsoon and Post-monsoon of replenishment study along with section coordinates and benchmarks details.

**B) The proposed site shall be visited by Sub-Committee of SEAC to verify the followings;**

- i) Environmental settings of the lease area.
- ii) Mining activity, if any carried out in the lease area.
- iii) Sand deposit in lease area as KML file shows lease area is surrounded by water and in stream sand mining is not allowed.
- iv) Road connectivity to the lease area.
- v) Distance of the road and railway bridge from the boundary of the lease area.
- vi) Cluster approach if any.
- vii) Distance of embankment from sand deposit.
- viii) Any other issues including local issues.

25. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
1.	RL values for Pre-monsoon and Post-monsoon of replenishment study along with section coordinates and benchmarks details.	The Pre-monsoon and Post-monsoon of replenishment study along with section coordinates and benchmarks details is attached as Annexure-1.

26. The SEAC in its meeting held on dtd. 03.05.2023 decided to take decision on the proposal after a site visit of the Sub-Committee of SEAC.

27. The proposed site was visited by the sub-committee of SEAC on 08.08.2023. Following are the observations of the sub-committee:

- a. The distance of the embankment from the sand deposit is about 80m.
- b. There is no major road or railway bridge nearby. The project proponent has informed that the sand will not be transported through the village road. He has discussed with the landowners and will construct a road for transportation of sand with their consent.
- c. The project proponent assured that he will plant adequate number of trees for protection of the river bank. It may be noted that in the proposal submitted by the proponent, he has proposed to plant 7500 nos. of saplings at an estimated cost of Rs. 3.10 lakhs. This may be carried out within the first two years. The proponent should ensure their survival in the subsequent years.

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- d. The proponent shall ensure that no inconvenience is caused to the villagers for their existing usage such as bathing etc., in Brahmani river.
- e. It is also recommended that the transport vehicles will be covered with tarpaulin to minimize dust/sand particle emissions.
- f. No natural water course shall be obstructed or diverted for the purpose of sand mining.
- g. The location of the village being close to the quarry, the project proponent shall ensure that the biological clock of the villagers is not disturbed. The floodlights should be oriented away from the villagers and the noise levels should be kept within the prescribed limit for day light/night hours.

Considering the information furnished and the presentation made by the consultant, **M/sEHS360 LABS PVT. LTD., Chennai** along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – D** and following specific conditions:

- a) Amended EIA Notification dated 25<sup>th</sup> July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure – E**.
- b) Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.
- c) Provision of Bio-toilet shall be made at the site.
- d) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- e) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.
- f) The location of the village being close to the quarry, the project proponent shall ensure that the biological clock of the villagers is not disturbed. The floodlights should be oriented away from the villagers and the noise levels should be kept within the prescribed limit for day light/night hours.
- g) No natural water course shall be obstructed or diverted for the purpose of sand mining.
- h) The proponent shall ensure that no inconvenience is caused to the villagers for their existing usage such as bathing etc., in Brahmani river.

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

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S TRISHNA SKYSCRAPER LTD. FOR RESIDENTIAL PROJECT "TSL SPRING CITY" (UNDER VIOLATION CATEGORY) LOCATED AT PLOT NO.- 180/1261,181/1292, KHATA NO. - 86, PLOT NO. 183 & 202, KHATA NO. 125, PLOT NO- 154 (P) & 177 (P), KHATA NO. - 172, PLOT NO. - 178,181 & 180/1291, KHATA NO. 102, PLOT NO. 204, 624, 625/1061, 203/1360 & 182, KHATA NO. -215. THE SITE AREA MEASURES 45,223.24 M<sup>2</sup>& TOTAL BUILT-UP AREA IS 1, 24,121.96 M<sup>2</sup>. THE PP HAS ALREADY CONSTRUCTED 39,483.11 M<sup>2</sup> BUA (~31.81%) AT SITE WITHOUT PRIOR ENVIRONMENTAL CLEARANCE LOCATED AT MOUZA - KANTABADA, BHUBANESHWAR, TAHASIL - BHUBANESHWAR, DISTRICT – KHURDA OF SRI SATYABRATA DHIR - VIOLATION TOR**

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1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference of M/s Trishna Skyscraper Ltd. for Residential Project "TSL Spring City" (Under Violation Category) located at plot no.-180/1261,181/1292, khata No. - 86, plot no. 183 & 202, Khata no. 125, Plot no- 154 (P) & 177 (P), Khata No. -172, plot no. - 178,181 & 180/1291, Khata no. 102, plot no. 204,624,625/1061, 203/1360 & 182, Khata no. -215. The site area measures 45,223.24 m<sup>2</sup>& total Built-up area (BUA) is 1, 24,121.96 m<sup>2</sup>. The PP has already constructed 39,483.11 m<sup>2</sup> BUA (~31.81%) at site without prior Environmental Clearance located at Mouza - Kantabada, Bhubaneshwar, Tahasil-Bhubaneshwar, District – Khurda of Sri Satyabrata Dhir.
3. **Category:** As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Item of Schedule to the EIA Notification, 2006 – category "B" or activity 8 (a): Building and Construction Projects.
4. **Violation justification:** Project Proponent started the construction work at site in 2011 without obtaining prior EC. 31.81% construction (BUA = 39,483.11 sqm) has been completed. Therefore, it is a violation of EIA Notification, 2006 and hence Environment Clearance is being sought under Violation category as per MoEFCC notification dated 14th Mar., 2017 and SoP dated 07th Jul., 2021.
5. **Location and Connectivity** – The proposed project is located at plot no.-180/1261,181/1292, khata No. - 86, plot no. 183 & 202, Khata no. 125, Plot no - 154 (P) & 177 (P), Khata No. -172, plot no. - 178,181 & 180/1291, Khata no. 102, plot no. 204,624,625/1061, 203/1360 & 182, Khata no. - 215, bearing Toposheet no.F45T11, Mouza - Kantabada, Bhubaneshwar, Tahasil - Bhubaneshwar, District – Khurda, Odisha. The geographical co-ordinates of project site are 20° 19' 12.63"N and 85° 43' 23.18"E and Kism of land is Gharabari. The project site is well connected through Khurda Chandaka road. NH-16 is 9.0 km (ESE) away from project site. The nearest railway station is Bhubaneswar Railway Station is about 14.11 km (North East) away from the project site. The nearest Airport is Biju Patnaik International Airport at 12.5 km (East) from project site. Jhumka Reservoir is 1 Km (WNW) of project site. Kamarkhunti reservoir is 8 Km (NNE) of project site. Kajala Gnada Dam is 10 Km (S) of project site. Deras Reservoir/Dam is 3.4 Km (W) of project site. Canal near site is 0.1 Km (SE) of project site. Canal near site: 0.6 Km (N) of project site. Eco sensitive Zone of Chandaka Dampara Wildlife Sanctuary is 0.1 km and outside the Eco sensitive Zone. Eco sensitive Zone of Nandankanan Wildlife Sanctuary is 11.2 km.
6. The site is coming under Bhubaneswar Development Authority.
7. The total plot area is 45,223.24 m<sup>2</sup>/11.17 acres. / 4.52 ha. with total built-up area 1,24,121.96 sq.mt.
8. **The Building Area Details of the Project:**

S. No.	Particulars	Area (m <sup>2</sup> )
1.	Total Plot Area	45,223.24
2.	Permissible Ground Coverage (@35% of the plot area)	15,828.13

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S. No.	Particulars	Area (m <sup>2</sup> )
3.	Proposed Ground Coverage (@33.5 % of the plot area)	15,152.73
4	Permissible FAR (@3 of the Plot Area)	1,35,669.72
5.	Proposed FAR (@2.52 of the Plot Area)	1,14,301.36
6.	Non-FAR Area	9,820.6
7.	<b>Total Built Up Area (5 + 6)</b>	<b>1,24,121.96</b>
8.	Green Area Proposed (@20 % plot area)	9,044.65
9.	Maximum Height of the Building up to terrace level (meter)	33.528 m

9. The total built-up area of the site is 1,24,121.96 m<sup>2</sup> out of which 39,483.11m<sup>2</sup> i.e. approx. 31.81 % construction has been done.
10. **Water requirement:** Fresh water requirement for the proposed project is 651 KLD which will be sourced from Ground Water.
11. **Wastewater generation and management:** It is expected that the project will generate approx. 858 KLD of wastewater and wastewater will be treated in STP of 1030 KLD capacity. The treated effluent partly will be reused for flushing & horticulture. Surplus treated effluent of 431 KLD will be discharged to nearby nallah.
12. **Power requirement:** Power requirement for the proposed project is 11875 KVA which will be sourced from Tata Power Central Odisha Distribution Limited (TPCODL). For backup, DG sets will be provided and it will be utilized during power failure. In the residential area, about 14 nos. 250 KVA DG sets will be installed and in the Club/retail & society (community area) area, 2 nos. 625 KVA DG sets will be installed.
13. **Details of Solar Power generation:** 10% energy will be saving from total energy load (5% through solar and 5% through LED).
14. **Rain Water Harvesting:** Total amount of rain water harvested will be in 1,278.934m<sup>3</sup>cum/ No. of pits: 16numbers.
15. **Parking Requirement:** Total parking area provided is 28656.8 Sq.mt. / 1125 ECS. Location of parking area to be provided is Surface and Stilt Parking.
16. **Green Belt Development:** Green belt will be developed over an area of 9044.65 sqm. which is 20% of the total plot area. Total no. of plants to be planted 570 trees to be planted in 3 tier plantation.
17. **Solid Waste Management:** During the operation phase, solid waste will be approx. 3927 kg/day (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for visitor, 0.25 kg per capita per day for staff and landscape waste @ 0.2 kg/acre/day).
18. **Baseline study:** The Project proponent had mentioned that Baseline study has been collected from period December 2022 – Feb 2023.

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19. **Project cost:**The estimated project cost is 160 crores and cost for EMP is Rs. 150.206 (capital cost) and Rs. 46.551 (recurring cost)
20. **Environment Consultant:** The Environment consultant **M/sGrass Roots Research and Creation India (P) Ltd. Noida** along with the proponent made a presentation on the proposal before the Committee on 31.07.2023.

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21. The SEAC in its meeting held on dated 31-07-2023 recommended the following:

(A) The proponent may be asked to submit the following for further processing of violation ToRs application:

- i. Copy of all statutory clearances applied/obtained.
- ii. Detailed calculation of greenbelt with breakup and dimensions Green belt of plot area and needs to be increased.
- iii. Exact distance of the proposed project boundary from the boundary of Eco-sensitive zone of Chandaka- Dampara Sanctuary along with map duly authenticated and certified by concerned DFO.
- iv. Year of commencement of construction work of the project and extent of construction work till now.
- v. Height of the building.
- vi. Structural stability certificate from the concerned authority as the building has been constructed long back.

(B) The proposed site shall be visited by Sub-Committee of SEAC to verify the followings. Violation ToRs to be issued after site visit.

- i) Environmental settings of the project site.
- ii) Extent of Construction of the project and its present conditions in terms of structural stability and safety.
- iii) Road connectivity to the project site.
- iv) Drainage network at the site.
- v) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vi) Any other issues including local issues.

22. The proposed site was visited by the sub-committee of SEAC on 21.08.2023. Following are the observations of the sub-committee:

- a) The PP along with Consultant and Architect were present. The PP explained that during 2010, permission from Panchayat was taken (as the site was not under (BDA/BMC), for 83 towers/blocks along with permission for leaving the storm/excess treated water into the nearby Nallah. PP has started the construction for few towers/blocks. Subsequently they took the approval of DUDA (District urban development authority, Govt of Odisha) only for 45 number of Towers/blocks in 2023, whose constructions were carried out as Phase-1 activity. Accordingly, they are applying for violation TOR.
- b) PP was asked to submit the following: i) A chronology write up of activity in brief ii) Copy of Panchayat and DUDA approval iii) Document in support of discharge of storm/excess treated water obtained from Panchayat.

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- c) The PP has developed about 40 ft wide road surrounding the Towers for access and fire corridor has been provided within the blocks. Copy of internal roads layout may be provided by PP (prepared by the Architect), for fire corridor use.
- d) As informed by PP, the 45 no of Towers include G+5, G+10 and S+5 as per approval of DUDA and they were also as per the Panchayat approval initially with more Towers. PP was asked to submit structural stability certificate by BDA empanelled expert and a Table with details of earlier approval with Panchayat and Present as approved by DUDA.
- e) The site has road connectivity, natural drain all along the side of the road and natural greenery. They need to develop green belt as per norms along with all other conditions required for the building construction.
- f) Few towers are completed and few are under progress.
- g) Details of violation calculation to be submitted certified by an empanelled Architect of BDA with regard to extent of construction etc. as per guidelines.
- h) All other information asked during the presentation to be submitted.

23. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC																											
1.	Copy of all statutory clearances applied/obtained.	<p>The details of chronological events of the project are shown in Annexure-I. The copies of all statutory clearances applied/obtained are as follows:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Statutory clearances</th> <th>Annexure</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sarpanch approval for layout</td> <td>Annexure II</td> </tr> <tr> <td>2.</td> <td>Fire Certificate</td> <td>Annexure III</td> </tr> <tr> <td>3.</td> <td>CGWA NOC</td> <td>Annexure IV</td> </tr> <tr> <td>4.</td> <td>Construction NOC from Bhubaneshwar (R&amp;B) division</td> <td>Annexure V</td> </tr> <tr> <td>5.</td> <td>HT clearance</td> <td>Annexure VI</td> </tr> <tr> <td>6.</td> <td>DUDA approval Letter</td> <td>Annexure VII</td> </tr> <tr> <td>7.</td> <td>Airport NOC</td> <td>Annexure VIII</td> </tr> <tr> <td>8.</td> <td>Power Supply</td> <td>Annexure IX</td> </tr> </tbody> </table>	S. No.	Statutory clearances	Annexure	1.	Sarpanch approval for layout	Annexure II	2.	Fire Certificate	Annexure III	3.	CGWA NOC	Annexure IV	4.	Construction NOC from Bhubaneshwar (R&B) division	Annexure V	5.	HT clearance	Annexure VI	6.	DUDA approval Letter	Annexure VII	7.	Airport NOC	Annexure VIII	8.	Power Supply	Annexure IX	Sarpanch approval; for layout as attached in Annexure – II is not clear may be checked.
S. No.	Statutory clearances	Annexure																												
1.	Sarpanch approval for layout	Annexure II																												
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6.	DUDA approval Letter	Annexure VII																												
7.	Airport NOC	Annexure VIII																												
8.	Power Supply	Annexure IX																												
2.	Detailed calculation of greenbelt with breakup and dimensions Green belt	As suggested we have increased the green area from 9044.65 m <sup>2</sup> to	Layout submitted																											

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	of plot area and needs to be increased.	9315.98 m2. The Landscape Plan with breakup and dimensions of Green belt is enclosed as <b>Annexure-XI</b> .	
3.	Exact distance of the proposed project boundary from the boundary of Eco-sensitive zone of Chandaka-Dampara Sanctuary along with map duly authenticated and certified by concerned DFO.	Eco sensitive Zone boundary of Chandaka Dampara Wildlife Sanctuary is 0.1 km from our project site. Since the site is outside the Eco sensitive Zone of Sanctuary NBWL clearance is not required.  DFO NOC is attached as <b>Annexure-XII</b> .	Certificate of DFO submitted mentioning the plots of the project is outside the Eco sensitive Zone of Sanctuary.
4.	Year of commencement of construction work of the project and extent of construction work till now.	We have started the construction at project site in year 2011 and construction was continued till year 2015.  The total built-up area of the project is 1,24,121.96 m2 out of which 39,483.11m2 (~31.81%) has been constructed at site. Detailed Construction status is enclosed as <b>Annexure-X</b> .	complied
5.	Height of the building.	The details of Height of Building are as follows: Block A- 18.4sqm, Block B – 17.7 sqm, Block C – 31.95sqm.,Block D – 16.975sqm. AAI NOC for building height is enclosed as <b>Annexure-VIII</b>	complied
6.	Structural stability certificate from the concerned authority as the building has been constructed long back.	Structural Stability certificate is enclosed as <b>Annexure-XIII</b> .	complied

The SEAC observed that the proponent has already constructed the project without obtaining Environmental Clearance as per EIA Notification 14<sup>th</sup> Sept. 2006 and amendment thereafter and applied for Environmental Clearance suo-moto under violation category. The SEAC, after detailed deliberations on the proposal in terms of the provisions of the MoEF&CC, Govt. of India Notification dated 14th March, 2017 confirmed the case to be of violation of the EIA Notification, 2006 and recommended for issuing Standard Term of Reference as per Annexure – F along with the following specific Term of Reference for undertaking EIA and preparation of Environmental Management Plan (EMP):

- (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 shall be recommended by

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- the SEAC 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) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.
  - (iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
  - (v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
  - (vi) The proponent shall pay the penalty for such violation as per SoP for violation issued vide OM F No. 22-21/2020/IA. III, dtd. 07.07.2021 of MoEF & CC, Govt. of India.
  - (vii) Fire disaster management plan specially designed for topmost floors with detailed note on hydrant system pump and water storage.
  - (viii) Detailed calculation of renewable energy/solar energy along with roof top solar plan layout.
  - (ix) Clear site layout showing all features of the project and distance from road.
  - (x) Traffic Study Report to be submitted and vetted from reputed institute.
  - (xi) Structural Stability certificate from appropriate authority as per regulatory authority guidelines be submitted and vetted from reputed institute.
  - (xii) Detailed calculation of Rain Water Harvesting and Layout showing Rainwater Harvesting pits.
  - (xiii) Layout map showing the treated water fallout to nearest drain and its distance.
  - (xiv) Layout of internal drainage map and their fallout to external public drain.
  - (xv) Copy of permission of the concerned authority of the drain / sewer to discharge the treated water from project to the nearby drain.
  - (xvi) Reduce discharge of treated water to drain by planting more trees.
  - (xvii) The greenbelt to be provided along the outer periphery of the plot along the boundary the spacing maybe reduced to 2m x 2m to accommodate more trees and should be planted on a hierarchical pattern.
  - (xviii) The concept of vertical garden may also be considered apart from landscaping, potted plants, Parks & Gardens.
  - (xix) The water Treatment Plant, Waste Water Treatment Plant, STP, DG set's location to be marked in the layout plan.
  - (xx) Adequate overhead portable water tank to be provided as per the norms apart from Treated Waste Water tank for use in dual plumbing system for the flush in the toilet.

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- (xxi) To submit Sabik RoR with Kisam and Hal RoR with Kisam to rule out involvement of Forest and DLC land in the project.
- (xxii) For parking of various types of vehicle adequate provision of basement, Stilt, Open area and Mechanical parking may be considered.
- (xxiii) Provision of lift with ventilation, lighting and AC from lowest basement to terrace roof top to be provided.
- (xxiv) Efforts for Energy Conservation in the project as per Bureau of Energy Conservation in line with Energy Conservation Act, 2003 to be submitted for the project.
- (xxv) Disaster Management Plan for the project may be prepared and submitted as per Disaster Management Act, 2005.
- (xxvi) Indicate the system of Storm Water Drainage, Rainwater Harvesting System and Recharge Well.
- (xxvii) The PP explained that during 2010, permission from Panchayat was taken (as the site was not under (BDA/BMC), for 83 towers/blocks along with permission for leaving the storm/excess treated water into the nearby Nallah. Approval copy of Panchayat mentioning the same.
- (xxviii) Document in support of discharge of storm/excess treated waste water obtained from Panchayat.
- (xxix) Copy of internal roads layout may be provided by PP (prepared by the Architect), for fire corridor use.
- (xxx) As informed by PP, the 45 no of Towers include G+5, G+10 and S+5 as per approval of DUDA and they were also as per the Panchayat approval initially with more Towers. PP was asked to submit structural stability certificate by BDA empanelled expert and a Table with details of earlier approval with Panchayat and Present as approved by DUDA.
- (xxxi) Details of violation calculation to be submitted certified by an empanelled Architect of BDA with regard to extent of construction etc. as per guidelines.

#### **ITEM NO. 06**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. ORISSA BRIDGE AND CONSTRUCTION CORPORATION LIMITED FOR CONSTRUCTION OF DHARMASAL AS [G+3 STORIED BUILDING CONSISTING 5 BLOCKS(1,2,3,4 & 5), WHERE BLOCK-1 IS COMING UNDER 'RESIDENTIAL" HOTEL (A-5) & BLOCK-2,3,4& 5 IS COMING UNDER "RESIDENTIAL" (LODGING & ROOMING HOUSES) OVER AN BUILT-UP AREA –38989.57 M2 AT BASELISAH I IN THE HERITAGE CITY OF PURI UNDER ABHADA SCHEME ON TURNKEY BASIS, OVER PLOT NO. 12,13 & 14, MOUZA-PURI SAHARA, UNIT NO.-2, MARKENDESWARA SAHI, DIST-PURI OF SRI SUNDARA MADHABA PADHI - EC**

1. This proposal is for Environmental Clearance of M/s. Orissa Bridge and Construction Corporation Limited for Construction of Dharmasal as [G+3 storied building consisting 5 Blocks(1,2,3,4 & 5), where Block-1 is coming under 'Residential" Hotel (A-5) & Block-2,3,4& 5 is coming under "Residential" (Lodging & Rooming Houses) over an Built-up Area –38989.57 m2 At Baselisahi In The Heritage City of Puri Under Abhada Scheme On Turnkey Basis,

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Environmental Scientist (SEAC)

- Over Plot No. 12,13 & 14, Mouza-Puri Sahara, Unit No.-2, Markendeswara Sahi, Dist-Puri of Sri Sundara Madhaba Padhi .
2. **Category:** As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Category B2 Under Schedule of item 8 (a) Building and Construction project.
  3. The land comes under Puri Konark Development Authority area. Total land required for this proposed project is Ac 11.09 Dec /44912.34 m<sup>2</sup> / 4.4912 Ha. The Proposed Construction of Dharmasala Project has been approved by approved by Puri Municipal Corporation.
  4. **Location and connectivity:** The proposed project is located at Plot No. 12,13& 14, Mouza-Puri Sahara, Unit No.-2, Markendeswara Sahi, Dist-Puri, Odisha and bounded by Latitude: 19°48'48.79"N and Longitude: 85°48'34.83"E bearing Toposheet No.E45B13].Project site is well connected with SH-59 -Brahmagiri Road (Puri- Satapada Road) Road which connects to NH-316 near Mangalahat Chawk at the distance of 200 m. South-West direction. Hence, no new road is required. Puri Railway station is 2.9 Km-ESE away from Project site. Janakadeipur Railway Station is 8.22 km away in North-North-East. Malatipatpur Railway Station is 5.99 km away in North-East. Biju Patnaik International Airport 48.34 km in North West. NH 59(Puri Satpada Rd ) -0.100ENE; NH 316-0.21-WNW; Bada Danda-1.32-SE ; Bay Of Bengal -2.48-SSE
  5. **Project details:** Total Plot Area is Ac 11.09 Dec /44912.34 m<sup>2</sup> / 4.4912 Ha. Total Built up Area 38989.57m<sup>2</sup>Max building height: 13.65 m. Total No. of Floors Proposed is [Dharmasalas [G+3 storied building consisting 5 Blocks(1,2,3,4 & 5), where Block-1 is coming under 'Residential" Hotel (A-5) & Block-2,3,4& 5 is coming under "Residential" (Lodging & Rooming Houses].Total No. of Blocks Proposed is 5 Blocks.
  6. **Seismic Zone:** Puri area falls in the Seismic Zone III& Seismic Intensity "moderate". This zone is called the moderate damage risk Zone & Zone factor Z = 0.16 as per IS: 1893 (Pt.1).
  7. **Lulc of Total Project Area :**

LULC OF PROJECT SITE	AREA IN SQM	AREA IN HA	%
OPEN PARKING	11332	1.133200	25.2
GROUND COVERAGE	10149.35	1.014935	22.6
INTERNAL ROAD	9176.84	0.917684	20.4
GREENBELT AREA	11415	1.141500	25.4
OTHERS	1554	0.155400	3.5
PAVED AREA	1285.15	0.128515	2.9
TOTAL AREA	44912.34	4.491234	100.0

8. **Parking Facilities:** During Operational Phase, parking details is as follows

	Area in m <sup>2</sup>
Parking area required( 30% OF FAR)	11,426.48
Parking area (provided)	11,485
Covered parking (in Block-1 )	153
Open parking area	11332

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Total Car Parking No's (Provided) Including Visitors Parking	Parking provision for 496 four-wheeler and 237 Two wheelers
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9. **Power requirement:** The power supply shall be supplied by TPCODL. The maximum demand load is estimated at 753.456 KW. Permission for Electrical supply to the proposed project site is received from office of the Divisional Manager (Electrical) through through Order No:- RC. NO. 4600000700 on dated 31/01/2023. There is provision of Power backup for the residential project will be through DG sets of total capacity 1 Nos. 1000KVA 415Volts DG Sets with acoustic enclosure with DG Synchronisation Facility Height of the DG Set Stack = 20 m. DG Set will be placed in the direction of SW Corner of the Plot
10. **Water Requirement and management:** During Operation Phase total water requirement of 538.5 KLD out of which Fresh water requirement is 362 KLD and flushing water will be 176.5 KLD. Fresh water of 362 KLD will be met from WATCO/Ground water and flushing water of 176.5 KLD will be met from recycled water. Wastewater will be treated in STP of capacity 480 KLD.
11. **Reuse of treated waste water:** Flushing is 176 KLD; gardening is 114 KLD and discharge to municipal drain is 55 KLD in dry season and 170 KLD in monsoon season. Presently there is public water supply system from WATCO is located near project site. Hence daily freshwater requirement will be met through supply water during the operation phase. The unit has obtained the permission from Office of the Manager WATCO Sub-Division, Puri vides order no. 69 on dated 10.01.2023.
12. **Rainwater harvesting:**

STORM WATER CALCULATION						
S. No.	Type of Surface	Catchment Area (A)		Runoff Coefficient (C)	Rainfall intensity mm/hr (I)	Total Discharge (Q)=10 CIA (m3/hr)
		sqm	Hectare			
1	Paved Area (Parking)	11332	1.1332	0.8	75	679.92
2	Paved Area (Driveway and footpath) (Paved and internal road)	0462	1.0462	0.15	75	117.6975
3	Building Terrace (i/c Substation, 200 sqm and HVAC Plant, 150 sqm)	10149	1.0149	0.9	75	685.0575
4	Lawn Area (Soft scape)	11415	1.141	0.15	75	128.3625
5	Unpaved area (Setback Line)	1554	0.1554	0.3	75	34.965
	Total	44912	3.07			1646.0025
DESIGN DETAILS						

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*J Nayak*  
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Rational formula for calculating runoff = $Q = 10X (C I A)$			
Q = Runoff in m3/sec			
I = Intensity of rainfall in mm/hr.			
A = Drainage area in hectares.			
C = Co-efficient of run off as below			
TOTAL RUN-OFF: Terrace (Rooftop) Area			
Average rain water as per Odisha Bye law		6.0cum/100sqmt of Roof area	
Terrace area in sqmt (as per measuring in drawing)		10149	Sqmt
Volume of rainwater from terrace		685	Cum/hr
Considering 20 Minutes (0.33 Hr) Retention Period		228	Cum
Considering RWH pit of size Diameter-2M & Liquid Depth-2M Volume of the pit		6.28	Cum
No of Pits required		36	nos
No of Pits Provided		46	nos

13. **Energy Conservation:** The power supply shall be supplied by TPCODL. The maximum demand load is estimated at 753.456 KW. Permission for Electrical supply to the proposed project site is received from office of the Divisional Manager (Electrical) through Order No:- RC. NO. 4600000700 on dated 31/01/2023. There is provision of Power backup for the residential project will be through DG sets of total capacity 1 Nos. 1000KVA 415Volts DG Sets with acoustic enclosure with DG Synchronisation Facility Height of the DG Set Stack = 20 m.

S. NO.	DESCRIPTION	% SAVING
1	LED and other types of Low Wattage High Lumen fittings for all Common Areas Like Stair Hall & Lift Lobbies, Landscaped Areas, Entry Gates and Area Lighting	0.80
2	LED and other types of Low Wattage High Lumen Light Source for Dwelling units	14
3	The Solar Power Demand For Campus area Light , Main Gate Light will be 37 KW (5% of total demand)	10
4	Post Top Lamps in three alternative circuits for need based use (by alternative switching off of the lamps)	0.20
	TOTAL	25%

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14. **Green belt area:** About 650 no of trees of 15 types of species (Neem, Peepal, Mango, Shisham, Sirish, Babool, Gulmohar or local plants as per the advice of forest officers) will be planted both inside the project area And all along the boundary to create a boundary of greenery. The project being a well-planned activity will result in organized open spaces and green areas. About 11415 sqm (25.41 % of plot area) of the area is earmarked for greenbelt development. The biodiversity in the area will increase due to the proposed green areas. The project will have an overall positive impact on the existing land use and will not cause any disturbance to the local ecology. Proposed activity shall have no impact on surroundings.

15. **Solid waste management:** The solid waste generated from project will be mainly domestic in nature and the quantity of the waste will be 0.614 Ton/day. Solid wastes generated will be segregated into biodegradable 0.732 T/Day (waste vegetables and foods etc.) and Non-biodegradable or recyclable 1.098 Ton/day (papers, cartons, thermo-col, plastics, glass etc.) Components will be collected in separate bins. The biodegradable organic wastes will be treated inside the premises by OWC (Organic Waste Converter) of capacity to treat 750 kg/day. Recyclable and non-recyclable wastes will be disposed through Govt. approved agency.

S. No.	Description	Occupant Load	Bio-degradable	Non-bio-degradable
		(Persons)	Gm/day	Gm/day
1	Block 1			
	Kitchen and Dining area	450	45000	67500
	Office and Shops (Staff)	20	2000	3000
	Office and Shops (Visitors)	80	8000	12000
	Residents	690	124200	186300
	Sub Total (1)	1,240	179200	268800
2	Block 2			
	Office (Staff)	3	300	450
	Office (Visitors)	15	1500	2250
	Residents	918	165240	247860
	Sub Total (2)	936	167040	250560
3	Block 3			
	Office (Staff)	3	300	450
	Office (Visitors)	15	1500	2250
	Residents	918	165240	247860
	Sub Total (3)	936	167040	250560
4	Block 4			
	Office (Staff)	3	300	450
	Office (Visitors)	15	1500	2250
	Residents	918	165240	247860
	Sub Total (4)	936	167040	250560
5	Block 5			

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	Residents	288	51840	77760
	Sub Total (5)	288		
	TOTAL POPULATION	4,336		
	TOTAL WASTE GENERATE		732160	1098240
			732.160 KG/DAY	1098.24 KG/DAY

16. **Project Cost:**-The estimated cost of the project is 136.5 Cr. EMP cost of the proposed project includes capital cost of 133 lakhs and recurring cost of 3.1 lakhs

Source	Capital Cost (In Lacs)	Recurring Cost ( In lacs)
Landscaping	10	0.5
Rain Water Harvesting	20	0.2
Solid Waste Management	10	0.5
STP	80	1.2
Acoustic Enclosure & DG Set Stack	10	0.2
Environmental Monitoring	3	0.5
<b>Total</b>	<b>133</b>	<b>3.1</b>

17. **Environment Consultant:** The Environment M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.

18. The SEAC in its meeting held on dated 07-07-2023 recommended the following:

- A. The proponent may be asked to submit the following for further processing of EC application:
- Land documents and Kisam of land.
  - Copy of Revenue map.
  - NOC from Puri Municipality to discharge treated waste water into the public drain along with the cross-section.
  - Provision for plantation alongside the road.
  - Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.
  - Traffic study vetted by a reputed institute.
  - Undertaking that there will be no structure that will be built on the Jalasaya.
  - Whether the site is coming within the purview of ASI. If so, status of permission from ASI.
- B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings

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- i) Environmental settings of the project site.
- ii) Construction activity, if any started at the site.
- iii) Road connectivity to the project site.
- iv) Applicability of CRZ Clearance.
- v) Drainage network at the site.
- vi) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vii) Any sand dune is there in site.
- viii) Any other issues including local issues.

19. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent															
1.	Land documents and kism of land.	<p>Proposed project site is comes under recreational zone as per land use plan of Puri Konark Development Authority The development of the green belt and other landscape would enhance the visual aesthetics of the area. The site is coming under Developmental Plan of Puri Konark Development Authority. The Building Plan has been applied to Puri Municipality Authority for approval. Proposed building plan has been submitted at Puri Municipal Corporation vide letter no. Dno. 3433/04.05.2023. Plan Approval letter from PMC given below.</p> <p>The site is located in the Northern part of the Puri Town. The proposed land use is consistent with the surroundings. The proposed Residential Dharmasalas Project [G+3 storied building consisting 5 Blocks(1,2,3,4 &amp; 5), where Block-1 is coming under 'Residential" Hotel (A-5) &amp; Block-2,3,4&amp; 5 is coming under "Residential" (Lodging &amp; Rooming Houses) as per Odisha Development Authority Planning &amp; Building Standard Rules-2020 and Residential Group-A (Subdivision- A-1) as per NBCI, 2016.] over Revenue plots given in Table no.-1.</p> <p>Dist-Puri, Tahasil-Puri Town, Mouza- Puri Sahara, Unit No.-2, Markendeswara Sahi, Dist-Puri, Odisha. Table no.1: Details of Plot no and kism</p> <table border="1"> <thead> <tr> <th>Sl.No</th> <th>Plot No</th> <th>Purchase Area dec.</th> </tr> </thead> <tbody> <tr> <td>01.</td> <td>12</td> <td>Ac 0.92 Dec</td> </tr> <tr> <td>02.</td> <td>13</td> <td>Ac 10.58 Dec</td> </tr> <tr> <td>03.</td> <td>14</td> <td>Ac 0.63 Dec</td> </tr> <tr> <td colspan="2"></td> <td>Ac 12.13 Dec</td> </tr> </tbody> </table> <p>Area under possession-11.09 Acres (44,912.34 sqm)  Proposed project is coming under "Residential" (Lodging &amp; Rooming Houses) as per Odisha Development Authority Planning &amp; Building Standard Rules-2020 and Residential Group-A (Sub-division- A-1) as per NBCI, 2016.] At Baselisahi In The Heritage City Of Puri Under Abhada Scheme On Turnkey Basis, Over Plot No. 12,13 &amp; 14, Mouza-Puri Sahara, Unit No.-2, Markendeswara Sahi, Dist-Puri, Odisha.  The proposed site is being used for Residential purpose under Puri</p>	Sl.No	Plot No	Purchase Area dec.	01.	12	Ac 0.92 Dec	02.	13	Ac 10.58 Dec	03.	14	Ac 0.63 Dec			Ac 12.13 Dec
Sl.No	Plot No	Purchase Area dec.															
01.	12	Ac 0.92 Dec															
02.	13	Ac 10.58 Dec															
03.	14	Ac 0.63 Dec															
		Ac 12.13 Dec															

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Environmental Scientist (SEAC)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent						
		Municipal Corporation. The project will be developed on the land measuring 44912.34 sqm or 11.09 Acres or / 4.4912 Ha at Mouza- Puri Sahara, Unit No.-2, Markendeswara Sahi, Dist-Puri, Odisha. Letter from Shree Jagannath Temple Office, Puri (Issuance of NOe pertaining to SITA lands for the project "Guest house for different group of Pilgrims such as construction of Dharmasala at Baseli Sahi in the heritage city of Puri under ABHADA Scheme". ATTACHED AS ANNEXURE-A.						
2.	Copy of Revenue map.	Given in Annexure –B						
3.	NOC from Puri Municipality to discharge treated water into the public drain along with the cross-section.	The project proponent (Odisha Bridge and Construction Corporation Limited) already applied to Tahasildar, Puri for Issue of NOC (No Objection certificate) for construction of approach road with drain from NH-316 to on-going Dharmasala Project near Baseli Sahi Police station. Application Letter is attached as Annexure-C.						
4.	Provision for plantation alongside the road.	Provision for plantation alongside the road is shown in layout plan. Attached as Annexure-D.						
5.	Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.	S. No.	Type of Surface	Catchment Area (A)		Runoff Coefficient (C)	Rainfall intensity (I)	Total Discharge (Q)=10 CIA (m3/hr)
				sqm	Hectare		mm/hr	
		1.	Paved Area (Parking)	11332	1.1332	0.8	75	679.92
		2.	Paved Area (Drive way and footpath) (Paved and internal road)	10462	1.0462	0.15	75	117.6975
		3.	Building Terrace (i/c Substation, 200 sqm and HVAC Plant, 150 sqm)	10149	1.0149	0.9	75	685.0575
		4.	Lawn Area (Soft	11415	1.141	0.15	75	685.0575

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent					
		scape)					
		5. Unpaved area (Setback Line)	1554	0.1554	0.3	75	34.965
		Total	44912	3.07			1646.0025
		<b>DESIGN DETAILS</b>					
		Rational formula for calculating runoff = $Q = 10X(CIA)$					
		Q = Runoff in m <sup>3</sup> /sec					
		I = Intensity of rainfall in mm/hr.					
		A = Drainage area in hectares.					
		C = Co-efficient of run off as below					
		<b>TOTAL RUN-OFF : Terrace (Rooftop) Area</b>					
		Average rain water as per Odisha Bye law			6.0cum/100sqmt of Roof area		
		Terrace area in sqmt (as per measuring in drawing)			10149	Sqmt	
		Volume of rainwater from terrace			685	Cum/hr	
		Considering 20 Minutes (0.33 Hr) Retention Period			228	Cum	
		Considering RWH pit of size Diameter-2M & Liquid Depth-2M Volume of the pit			6.28	Cum	
		No of Pits required			36	Nos	
		No of Pits Provided			46	Nos	
		As per the soil testing report, The ground water table of these bore holes were varying from 0.8m depth above the existing ground level to 1.0m below the existing ground level. As per CGWB, the water level in PURI during monsoon season is 0-2 m. Filling up to 3 meter from existing ground level. The Liquid Depth Of The Proposed Recharge pit 2 m. the difference between lower level of recharge pit and ground water level during monsoon is 2 m.					
6.	Traffic study vetted by a reputed institute.	Traffic Study Report Is Attached as Annexure-F.					

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*J Nayak*  
Environmental Scientist (SEAC)





connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be

- iii) Trees located within the project area shall be transplanted to alongside the boundary green development area.
- iv) To reduce discharge of treated water to open drain, the proponent shall use more water for increased number of trees proposed to be planted in the green belt area & shall also utilize this treated water for car washing, floor washing to minimize the surplus discharge to drain.
- v) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- vi) The proponent shall obtain building plan approval, Fire NOC, CRZ and ASI clearance if applicable.
- vii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

#### **ITEM NO. 07**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF BHUBANESWAR DEVELOPMENT AUTHORITY FOR CONSTRUCTION OF B+S+9 STORIED COMMERCIAL/ RESIDENTIAL APARTMENT CONSTRUCTION WITH BUILT-UP AREA FOR THE PROJECT WAS 17923 SQ.M. AT PRESENT WITH PARKING AREA OF 7477 SQ.M THE TOTAL BUILTUP AREA IS NOW 25400 SQ.M I.E > 20,000 SQ.M AT BHAGABANPUR MOUZA, BHUBANESWAR, KHORDHA OF SRI LOKANATH PRASAD MOHAPATRA – EC (VIOLATION CASE)**

1. This proposal is for Environmental Clearance of Bhubaneswar Development Authority for Construction of B+S+9 storied commercial/ residential apartment construction with built-up area for the project was 17923 Sq.m. At present with parking area of 7477 Sq.m the total builtup area is now 25400 Sq.m i.e > 20,000 Sq.m at Bhagabanpur Mouza, Bhubaneswar, Khordha of Sri Lokanath Prasad Mohapatra.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) Building and Construction projects as per EIA Notification dated 14th Sep, 2006 as its amendments.
3. **Project details:** BDA was constituted on 1<sup>st</sup> Sept, 1983 under provisions of ODA Act, 1982. Initially, 115 revenue villages of Bhubaneswar, Khordha and Jatni were taken into its jurisdiction, but due to bifurcation and inclusion of new villages, at present the number of villages under its jurisdiction stands at 556. The construction project of B+S+9 storied commercial and residential apartment is spread over about 1.48 acres of land, the construction project is for commercial and residential purpose. Total built-up area of the project is 25400 sq.m with parking area of 7477 Sq.m. Green area allocated for the project is 600 sq.m. The project will create commercial facility in the ground and first floor of the project site, parking in the basement and stilt and 7 floors for residential purpose. There will be 70 nos of residential apartments in the project. The construction work for the project has been carried out by Bhubaneswar Development authority as the initial built-up area for the project was 17923 Sq.m. However, after the completion of the project, there was the requirement of parking area of 6500 Sq.m. Looking to the additional requirement of parking as the project include commercial space, BDA allocated an area of 7477 Sq.m of the area for parking purpose, leading to total built up area 25400 Sq.m.

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*J Nayak*  
Environmental Scientist (SEAC)

4. **Violation justification:** As the built-up area is now greater than 20,000 Sq.m, Environment clearance is required for the project as per EIA Notification, 14<sup>th</sup> September 2006, and subsequent amendments. As the construction of the project has been completed, the project is coming under violation to EIA Notification 2006. Violation ToR was issued for EIA Study by the SEIAA, Odisha vide file no. SIA/OR/INFRA2/414838/2023, dated 28.04.2023.
5. Land has been allocated by Odisha State Govt. to Bhubaneswar Development Authority for Developmental purpose.
6. **Location and connectivity:** The proposed project includes the Plot area of 1.48 Acres with built-up area: 25400 Sqm and located on Khata No. 683/1, Plot No: 86, 193, 347/2415, 1046/1480, 83/1680; Kissam – Gharabari, Mouza – Bhagabanpur, Bhubaneswar, Odisha. The area is located in Survey of India Toposheet No. 73 H/11. The project site is connected by NH16 road and located near DN Regelia mall. The site is surrounded by 30m wide approach road towards south and NH 5 on the north direction. BDA has already taken up residential and commercial projects at Kalinga Nagar.
7. **Topography and drainage:** The area for the construction project is in alignment with the surrounding developmental plan of Bhubaneswar. The nearby area is being used for construction of building; apartments used for residential purposes. So the existing land use pattern of the area will not significantly change due to the construction of "Bhubaneswar Development Authority – Bhubaneswar. The drainage of the district is mainly controlled by rivers like The Mahanadi, Kuakhai, Kushabhadra, Daya, Ran, Kalijiri, Sulia, Kharia & the Kusumi. Being a coastal district the river basins are much wider and the sand sources are very much suitable for construction purposes. There is no natural drainage system passing through the project area.

8. **Area details:**

Sl. No	Building Name	Stories	No. of Dwelling units	Built up area in Sq.m
1.	Basement + Stilt for parking	2	--	7477 Sq.m
2.	Ground + 1st Floor (Commercial)	2	--	5620 Sq.m
3.	2nd Floor – 8th Floor (Residential)	7	70	12303.2 Sq.m
Total Built up area				25400 Sq.m
Total Green area				600 Sq.m (10%)
FAR achieved				2.99
Permissible FAR as per the local bye laws			- 2.25	
Achieved FAR as per the Master Plan			- 2.99	
Max Built up area achieved			- 87756.41 Sq.m	
Max Ground Coverage permissible			- 40%	
Ground coverage achieved as per Master Plan			- 37%	

9. **Baseline study:**

PERIOD	April 2023
AAQ Monitoring result	PM 10 – 64.7 to 78.6 µg/cu.m; PM2.5 – 35.6 to 43.2 µg/cu.m SO2 – 6.5 – 12.8 µg/cu.m; Nox – 14.4 to 21.5

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Ground water Quality at 6 Location	pH- 7.2 – 7.3 Total Hardness – 140-160 mg/l, Fluorides – 0.3 to 0.35 mg/l, TDS – 0.5 – 0.8 mg/l, Iron – 0.4 to 0.8 mg/l; Heavy metals (Cd <0.001, Hg<0.0005, As<0.001)
Surface water at 4 locations	pH –7.0 to 7. 2, DO- 5.8 to 6.1mg/l, BOD- 1.8- 2.5 mg/l, COD 8 to 15 mg/l, Chloride – 20 to 40 mg/l/Heavy metals (Cd <0.001, Hg<0.001, As<0.01)
Noise level at 7 locations	In the project site the daytime noise level is 51.0 dB (A) and the night time noise level is 39.6. The maximum noise level is 53.3 dB (A) during the day time and maximum noise level is 46.5 dB (A) during the night time at Patrapada area.
Soil Quality at 5 locations	pH: 5.4-6.1; Organic Carbon content is moderate to high (0.56 to 0.98%) Nitrogen (N) is Low (176-213 Kg/Ha), Available phosphorus content (28.5 to 33.8 kg/Ha), Available potassium low (84.7-104.8 Kg/Ha). Soil analysis result shows that soils are moderately leached, acidic in reaction, low in available nitrogen content and high in phosphorus content & potassium content. The soil of the area is found to have low fertility.

10. **Power requirement:** Total electricity requirement for the buildings will be 1597 KW which will be supplied by the central Electricity supply Utility, Bhubaneswar Odisha. Out of the total power requirement, 2x40 KW will be from solar energy and other 1517 KW will be sourced from CESU, Bhubaneswar. Two nos. of D.G set of 380 kVA has been installed for emergency power back up in the housing complex.
11. **Solar power generation:** Out of the total energy consumption 5% i.e. 80 KW will be fed from Solar energy. No of Solar panels to be installed are 125 nos. Size of solar panel is 2m x 1 m. Area required for installation of roof top solar panel is 250 sq.m.
12. **Water requirement:** Total water requirement for the housing complex will be 100 KLD out of which 70 KLD will be required for domestic purpose and 30 KLD will be required for flushing purpose. Dual plumbing system will be adopted in the buildings. 30 KLD of water required for flushing will be the STP treated water and the fresh water requirement will be 70 KLD.

Sl. No.	Description	Total Population	Fresh Water Requirement				Water Flow To STP				Total	
			Flushing (recycled water)		Domestic (Fresh Water)		Gross Water	Flushing		Domestic		
			LPC D	LPD	LPC D	LPD		LPD	%			LPD
Domestic Water												
1	Housing complex	350	45	15750	90	31500	47250	100	15750	85	26775	42525
2	Commercial area (Floating population)	200	45	9000	90	18000	27000	100	9000	85	15300	24300

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2	Commercial area (Fixed population)	200	--	--	55	11000	11000			85	9350	9350
2	Misc.	100	45	4500	90	9000	13500	100	4500	85	7650	12150
<b>Total</b>				29250		69500	98750		29250		59075	88325
Lpd: Litres Per Day												
Lpcd: Litres Per Capita Per Day												
Total water requirement for the project will be 100 KLD, Out of which 70 KLD will be fresh water required for domestic purpose, 30 KLD will be STP treated water used for flushing and another 30 KLD of STP treated water will be used for gardening purpose												
Water will be sourced from PHED												

13. **Wastewater generation and management:** About 90 KLD of waste water will be generated from the housing complex and community hall. There is the proposal of establishment of 100 KLD STP.
14. **Rainwater harvesting details:** There is the proposal for rain water harvesting within the project site. The project will create 6 nos of rain water recharge pit with 6m x4.5mx1.5m capacity.
15. **Solid-waste generation and management:** About 215 Kg of solid waste will be generated from the propose group housing project which include bio degradable and non biodegradable waste. The recyclable material like thermocol, cartoon boxes, newspaper waste is given back to suppliers for recycling. The non bio degradable waste will be disposed through BMC and the Biodegradable waste will be utilized for composting. The sludge generated from the STP (10 Kg approx.) will be dried in sludge drying yard and used as fertilizer for the plants within the project site.

Generation of solid Waste			
Total Floating Population as calculated in water balance table	400	nos	
25% of the floating population=	100	nos	
Total paved area street sweeping	300	sqm	
NBC Standard			
Type of User	Kg/capita/day	in kgs	
Residential reuse	0.3 to 0.6	160	
Commercial reuse	0.1 to 0.2	40	
Street Sweeping	0.05 to 0.2	15	
<b>Total</b>		215	directly disposed through municipality

16. **Greenbelt:**Total open space available for green belt development is 660 sq.m which is 11% of the total plot area. Further there are four nos. of 15 sq.m area allocated within the building area to be developed as lawn. Total of 165 saplings will be planted within the project site. Proposed species

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for plantation includes Karanja, Neem, Krushachuda, Chatiana, Ashok, Nageswar, Bottle brush, Kathachampa, Sunari etc. Due to non-availability of space within the project, the proponent (BDA) responsible for responsible for development and greenery development of Bhubaneswar will develop greenery in compensation to this project.

17. **Parking details:**The permissible parking space required for the group housing is 6500 Sq.m. However, the achieved Parking area for the project will be 7477 Sq.m. It has been estimated that per capita requirement of parking space for an Indian household is 230 sq. ft.

18. **Traffic details:**

S. No.	Particulars of the Road	NH 16
1.	Type of Carriage way	Four Lane two way
2.	As per IRC: 106 -1990 Lane Capacity (PCU /hour)	3600
3.	Existing Volume Count (PCU)	1370
	V/C Index LOS	0.38 C
4.	Incremental Volume Count (PCU)	1444
	V/C Index LOS	0.40 C

19. **Project cost:** Total project cost is 61.19 Cr. which include all the construction and installation cost of the building.

20. **The cost estimated towards Violation as follows -** As per the damage assessment study carried out for the project, the cost allocated is 193.74 Lakhs out of which Rs. 186.14 Lakhs has been already spent in the project and 7.60 Lakhs will be incurred during the next 1 year. For natural resource augmentation programme total cost allocated will be 49.43 Lakhs which will be used for installation of rooftop solar panel and plantation.

Sl. No	Activities	Total Cost (Lakh of Rs.)
A	Budget under Remediation plan based on the damage assessment due to violation	193.74
B	Natural Resource Augmentation Plan	49.43
<b>Total</b>		<b>243.17</b>
Cost allocated for the activities already carried out for the project		186.14 Lakhs
Proposed Budgetary allocation towards implementation of Remediation plan based on the damage assessment and natural resource augmentation plan due to violation		57.03 lakhs
<b>Proposed Mandatory cost of EMP including annual operation cost</b>		<b>110.85</b>

Table: EMP cost

Sl. No	Particulars	Amount (Rs in Lakhs)
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Capital Cost		
01	Installation of STP within the project site	45.0
02	Construction of Rain Water Harvesting structure and recharge pits	20.0
03	Plantation along the project boundary	0.5
04	Construction of Surface Water Drains	20.0
05	Construction of DG stack	10.0
06	Solid waste management	2.0
Total		105.5

Sl. No.	Activities	Allocated Budget (Rs.)/ Annum
Recurring Cost		
1.	Maintenance of STP	4,00,000.00
2.	Plantation and maintenance of the green belt and avenue plantation	25,000.00
3.	Regular maintenance of DG set and monitoring of DG stack	50,000.00
4.	Environmental monitoring	60,000.00
Total		5,35,000.00

21. **Penalty cost for Violation:** In compliance to SoP for violation dated 28.01.2022, penalty provision as calculated will be 1% of the project cost of Rs. 61.19 Lakhs. As per the guideline the percentage rate will be halved if the project proponent suo-moto declares the violation. In this case the proponent has claimed that they have declared the violation and requested that penalty amount should be made halved.
22. **Environment Consultant:** The Environment consultant M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.
23. The SEAC in its meeting held on 05.07.2023 recommended the following:
- A. The proponent may be asked to submit the following for further processing of EC application:
- Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.
  - Disaster management plan for firefighting and provision for diesel-based hydrant.
  - Traffic study report vetted by reputed institute.
  - Details of case filed under violation.
  - Undertaking by PP that no occupant certificate has been issued.
  - Safety measures to be taken, to avoid accidents as the approach road of the project is connected to NH.

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- vii) Total cost of the project & total turnover cost for calculation of penalty.
- viii) Greenbelt area proposed is 11%. They have to submit a proposal for 20% greenbelt within the project site.
- ix) The breakup of EMP cost shown in above table are costs of capital investments for creation of facilities as per EMP. Recurring cost given in table below is only Rs.5.35 lakh per annum for these facilities. Hence "Proposed Mandatory EMP Cost per annum Rs.110.85 lakh" needs to be corrected accordingly.

**B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings**

- i) Environmental settings of the project site.
- ii) Extent of construction activity.
- iii) Road connectivity to the project site.
- iv) Drainage network at the site.
- v) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vi) Greenbelt area.
- vii) Any other issues including local issues

24. The proposed site was visited by the sub-committee of SEAC on 08.08.2023. Following are the observations of the sub-committee

- a) It is a violation case. BDA officials explained the project layout and plan.
- b) The project is almost completed. Certain additional plantations were seen inside the boundary. Some more plantations planned adjacent to the boundary.
- c) All required facilities related to Environment like: RWH, green belt, Parking, Separate parking areas and Gates for residential and commercial facilities, STP, Fire corridor etc. were shown by the PP.
- d) They were asked to submit the drain lay out showing the final fall of excess treated water along with NOC from appropriate authority (This could be a condition of EC).
- e) Fire clearance, Airport authority clearance needs to be taken before occupancy and other documents asked during presentation to be submitted.
- f) To submit the details Fire fighting provisions and Solar power to be installed.

25. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
11.	Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.	The surface level of the project site is 61 mRL. Reduced level of the bottom of the rain water harvesting is 4.5m below the surface level is 56.5 mRL. The depth of ground water table found during the digging of borehole is 45	submitted

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		mRL. The rain water pits are adequate for effective recharge of rain water. Details of rain water calculation and capacity of recharge pit is attached as Annexure 1.	
12.	Disaster management plan for firefighting and provision for diesel-based hydrant.	Disaster management plan for firefighting measures has been attached as Annexure 2.	submitted
13.	Traffic study report vetted by reputed institute.	Vetted traffic study report attached Annexure 3.	Traffic study Report vetted by Trident Academy of Technology. LOS is under "C" category.
14.	Details of case filed under violation.	The govt. is under the process of filing the case under violation. We will be submitting the documents within a month.	Not submitted
15.	Undertaking by PP that no occupant certificate has been issued.	Undertaking by PP that no occupant certificate has been issued attached as Annexure 4.	Not submitted
16.	Safety measures to be taken, to avoid accidents as the approach road of the project is connected to NH.	The main entrance of the project is open to 9m service road which connect to 30m wide internal road connecting to NH 5. Map showing details of transportation route of the project is attached Annexure 5.	-
17.	Total cost of the project & total turnover cost for calculation of penalty.	<ul style="list-style-type: none"> <li>Cost of the project: 61.19 Crores</li> <li>Penalty provision as calculated is as below:</li> <li>1% of the project cost: Rs. 61.19 Lakhs</li> <li>As per the guideline the percentage rate will be halved if the project proponent suo-moto declares the violation.</li> <li>In this case the violation has been declared by the project proponent (Suo-moto). So the penalty will be halved = Rs. 30.595 Lakhs.</li> </ul>	-
18.	Greenbelt area proposed is 11%. They have to submit a proposal for 20% greenbelt within the project site.	An area of 660 sq.m along the boundary of the project site has been developed as green belt. Further another 600 sq.m of area in front of the project site has been developed as green belt. Total green area is 1260 sq.m (21%) of the project site. Proposed species for plantation includes Karanja, Neem, Krushachuda, Chatiana, Ashok, Nageswar, Bottle	submitted

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		brush, Kathachampa, Sunari etc. Plantation has been initiated by BDA along the boundary and the open space in front of the project site. Detail plan showing the green belt is attached <b>Annexure 6</b> .	
19.	The breakup of EMP cost shown in above table are costs of capital investments for creation of facilities as per EMP. Recurring cost given in table below is only Rs.5.35 lakh per annum for these facilities. Hence "Proposed Mandatory EMP Cost per annum Rs.110.85 lakh" needs to be corrected accordingly.	It may be clarified that the capital cost for EMP is Rs. 105.5 Lakhs and Recurring cost for EMP is Rs. 5.35 lakhs per annum. Detail breakup of the EMP cost is attached as <b>Annexure 7</b> .	submitted

26. The SEAC in its meeting held on dated 11-09-2023 decided to take decision on the proposal after receipt of the following from the proponent.

- i) Total turnover cost of project duly certified by concerned authority for calculation of penalty.

27. The proponent has furnished the compliance as follows:

(i) The Project Proponent / BDA has not issued any occupancy certificate to any of its allottees who have purchased house in respect of the proposed B+S+9 multi storied commercial cum Residential Apartment project at Bhagabanpur Mouza, Bhubaneswar, Khordha. An undertaking in respect of non-issuance of any Occupancy Certificate to the Allottees of the residence has been submitted during appraisal of the application before SEIAA, Odisha vide letter no. 353, Dated 08.06.2023 (Copy enclosed as Annexure-1).

(ii) Since the allottees have not been handed over any of the residence, as per the Standard of Procedure dated 07.07.2021 & 28.01.2022 issued by MoEF & CC; 0.25% of the total turnover is not applicable for estimation of penalty under violation case.

(iii) Rather 1% of the project cost as certified by the Chartered Accountant identified as penalty amount for estimation and since the violation has suo-moto declared by the User, the penalty amount calculated and levied as 0.5% of the project cost only.

(iv) The detailed calculation for penalty amount as per project cost has been given below:

Sl No.	Certified Cost of the Project	Penalty amount estimated @ 0.5% of the project cost
1.	Rs. 61,19,19,999.00	Rs. 30,59,600.00

(Copy of certified issued by the Chartered Accountant enclosed as Annexure-2)

- (v) Further, abstract of the Damaged Assessment Report and Natural Resource & Community Augmentation Plan due to violation occurred is detailed as under:

Sl No.	Activities	Cost Allocation
1.	Total Budgetary allocation under Damaged Assessment report and Remediation measures	Rs. 243.17 Lakh

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	towards. Natural Resource & Community Augmentation Plan estimated	
2.	Less: Budgetary allocation under Remediation Plan already carried on.	Rs. 186.14 Lakh
3.	Budgetary allocation under Remediation Plan proposed against which Bank Guarantee to be submitted.	Rs. 57.03 Lakh

Therefore, it is clarified that an amount of Rs. 30,59,600/- has to be released as penalty amount and Rs. 57,03,000/- has to be submitted as bank guarantee amount.


**28. The Committee observed the followings;**

- a) Cost proposed for Remediation Plan, Natural Resource Augmentation Plan for Damage Assessment is Rs. 243.17 lakhs (Rupees two hundred and forty - three lakhs seventeen thousand only).
- b) Cost of assessment of Environmental / Ecological damage due to violation is Rs. 193.74 lakhs/- (Rupees one hundred ninety-three lakhs and seventy four thousand only).
- c) Cost allocated for the activities already carried out for the project – 186.14 lakhs.
- d) Total cost towards Remediation Plan, Natural Resource Augmentation Plan for Damage Assessment & assessment of Environmental / Ecological damage is Rs. 57.03 lakhs for which the proponent has to submit Bank guarantee with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.
- e) Total cost of the project is Rs. 61.1919999 Crores and 1% of the project cost is Rs. 61.19 lakhs.
- f) The Project Proponent has certified that Occupancy Certificate Has Not Been Issued By BDA till date.
- g) Total penalty to be paid by the proponent as per SoP of MoEF & CC, Govt. of India dtd. 07.07.2021 for violation is (1% of the project cost) = Rs. 61.19 lakhs.
- h) As per the guidelines the percentage rate will be halved if the project proponent suo-moto declares the violation. In this case the violation has been declared by the project proponent (Suo-moto). So the penalty will be halved = Rs. 30.595 Lakhs (Rupees thirty lakhs and five hundred and ninety- five thousand only).
- i) The Director (Env.)-cum-Special Secretary to Govt., F&E Deptt., Govt. of Odisha had requested to the Collector and District Magistrate, Khordha to take legal action against the project proponent under the provision of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006.
- j) The Collector and District Magistrate, Khordha has initiated legal proceeding against the project proponent.

Considering the information furnished and the presentation made by the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 10 years

with the following specific conditions in terms of the provisions of the MoEF&CC, Govt. of India notification dated 14<sup>th</sup> March, 2017 in addition to the conditions stipulated as per Annexure – H.

- (i) The project proponent shall submit a Bank Guarantee (BG) of an amount of Rs. 57.03 lakhs towards Remediation Plan, Natural Resource Augmentation Plan & Community Augmentation Plan for Damage Assessment & assessment of Environmental / Ecological damage with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.
- (ii) The proponent shall deposit separately (other than BG) an amount of Rs. 30.595 Lakhs towards the penalty for violation as per SoP of MoEF & CC, Govt. of India dtd. 07.07.2021.
- (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).

  
MEMBER SECRETARY, SEAC

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**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S PENGUIN TRADING & AGENCIES LIMITED OF EXPANSION OF RAIKELA AND TANTRA IRON MINES FROM 2.16 MTPA TO 2.592 MTPA THROUGH OPENCAST MINING METHOD WITH PROPORTIONATLY EXCAVATION (ROM + OB) OVER AN ML AREA OF 49.372 HA. IN VILLAGES – RAIKELA, TEHSIL - KOIDA OF SUNDARGARH DISTRICT OF SRI RAMAN RASHMI NAYAK – EC.**

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- (I) **Statutory compliance**
- (i) 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.
- (ii) 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.
- (iii) 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.
- (iv) 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,
- (v) 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.
- (vi) 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.
- (vii) The PP 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.
- (viii) 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 thereunder in respect of lands which are not owned by it.
- (ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29<sup>th</sup> 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".

- (x) 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.
- (xi) 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.
- (xii) State Pollution Control Board 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.
- (xiii) 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 State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change ([www.environmentclearance.nic.in](http://www.environmentclearance.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
- (xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha 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.

**(II) Air quality monitoring and preservation**

- (i) 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<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PC/II, 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.
- (ii) 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 PM<sub>10</sub> and PM<sub>2.5</sub> are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah 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.

**(III) Water quality monitoring and preservation**

- (i) 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.
- (ii) 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.
- (iii) 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.
- (iv) 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 / SEIAA, Odisha. 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 be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, 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.
- (v) 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.
- (vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernatant after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.
  - (vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.
  - (viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.
  - (ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.
  - (x) 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.
  - (xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed 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.
  - (xii) 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.
- (IV) Noise and vibration monitoring and prevention**
- (i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
  - (ii) 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.

- (iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker 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.

**(V) Mining Plan**

- (i) 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.
- (ii) 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.
- (iii) 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 / SEIAA, Odisha.

**(VI) Land reclamation**

- (i) 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.
- (ii) 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.
  - (iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
  - (iv) 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.
  - (v) 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, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.
  - (vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff 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.
  - (vii) 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 comers of the garland drains.
  - (viii) 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.

- (ix) 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.

**(VII) Transportation**

- (i) No Transportation of the minerals shall be allowed in case of roads passing through 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. 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.
- (ii) The Main haulage road within the mine lease should be provided with a permanent water 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.
- (iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.
- (iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

**(VIII) Green Belt**

- (i) 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.
- (ii) 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.

- (iii) 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.
- (iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I 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.
- (v) 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.

**(IX) Public hearing and human health issues**

- (i) 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.
- (ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.
- (iii) 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.

- (iv) 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 x 14 inches and of good quality).
- (v) 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.
- (vi) 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.
- (vii) 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.

(viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing conducted on 09.11.2021 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.

(ix) 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.

**(X) Corporate Environment Responsibility (CER)**

(i) 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 SEAC 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.

(ii) 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 / SEIAA, Odisha.

**(XI) Miscellaneous**

(i) 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.

(ii) 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.

(iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

(iv) 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, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.

(v) 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.

(vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.

- (vii) 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.
- (viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.
- (ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.
- (x) 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.
- (xi) 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.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR  
DECORATIVE STONE MINES & STONE QUARRY**

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**A. Specific conditions**

1. The Project Proponent shall obtain consent from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.
2. Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
3. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
4. Project Proponent shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the Regional office of the Ministry and SEIAA, Odisha.

**B. Standard conditions**

1. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA, Odisha 5 years in advance of final mine closure for approval.
2. No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
4. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
5. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
6. Mining shall be carried out as per the provisions outlined in the approved mining plan as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
7. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.
8. Digital processing of the entire lease area using remote sensing technique shall be

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carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office and SEIAA, Odisha.

9. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board.
10. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected 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.
11. Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
12. 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 light/night hours.
13. Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
14. There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
15. The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.
16. The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic



parameters and allows only species adapted to that micro climate.

17. The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
18. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
19. Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
20. The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.
21. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.
22. As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio

Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

23. 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.
24. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
25. 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.
26. 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.
27. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
28. A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
29. State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
30. The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at [www.environmentclearance.nic.in](http://www.environmentclearance.nic.in) and a copy of the same should be forwarded to the Regional Office.
31. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
32. 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.
33. The above mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

## **5.5. HAZARDS AND RISK MANAGEMENT**

### **5.5.1 Explosives**

Blasting is done by means of explosives which are hazardous during handling, storage and blasting.

#### **5.5.1.1. Storage and Handling**

The Applicant is advised to store the explosives as per the Indian Explosives Act, 1958 and the Explosive Rules, 1983. Necessary permissions should be obtained from the Joint Controller of Explosives to store and use of explosives in the quarry in the magazine permit under Form - 23 or Agreement shall be made with holder of Form - 22 who can supply and fire explosives as per safety practices. However blasting in the mine or quarry shall be done as per the MMR, 1961 under the supervision of Mines Blaster certificate holder, appointed under Reg. 160 of Metalliferous Mines Regulations, 1961.

#### **5.5.1.2. Blasting**

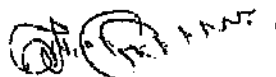
Poorly designed shots can result in misfires, early ignition and flying rock. Safety can be ensured by planning for round of shots to ensure face properly surveyed, holes correctly drilled, direction logged, the weight of explosion for good fragmentation. Blast design, charge and fire around of explosives should be carried out by a trained person.

#### **5.5.1.3. Drilling**

Slipping and Falling of labours from the edge of a bench during drilling is possible. Part of training should include instructions to face towards the open edge of the bench so any inadvertent backward step is away from the edge. Suitable portable rail fencing which can be erected between the drilling operations and the edge of the mine can be provided. Attachment of a safety line to the drilling rig and provide harness for the driller to wear can be done. Newer drill machines are provided with cabin which controls noise level within cabins. Driller operators should be protected with ear protection.

### **5.5.2. Loading**

Possible risks during loading of mined rocks are falling of rock on the driver, plant toppling over due to uneven ground, failure of hydraulic system, fires, fall while gaining access to operating cabin, electrocution in Draglines, failure of wire ropes in Dragline. In order to overcome these risks:



- Operator cabin should be of suitable strength to protect the driver in event of rock fall.
- Electrical supply to dragline should be properly installed with adequate earth continuity and earth leakage protection.
- Wire rope should be suitable for work undertaken and be examined periodically.
- Ensure that loaders are positioned sufficiently away from face edges

### 5.5.3. Transportation

Brake failure, lack of all-around visibility from driver position, vehicle movements particularly while reversing, rollover, Vibrations, Noise, Dust and improper / no signalling are some of the factors causing risk. This can be avoided by following measures:

- Visibility defects can be eliminated by the use of visibility aids such as closed circuit television and suitable mirrors.
- Edge protection is necessary to prevent inadvertent movement.
- Seatbelt to protect driver in event of vehicle rollover.
- Good maintenance and regular testing necessary to reduce possibility of brake failure.
- Avoid driving at the edge of roadway under construction
- Heavy earth moving equipment and vehicle drivers and those giving signals should be well trained.

### 5.5.4. Unstable face

Chances of Rock fall or slide exists. Regular examination of face must be done and remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working should be advanced in a direction taken into account the geology such that face and quarry side remain stable.

### 5.5.5. General safety measures

Provisions of the Mines Act, Rules and Regulations orders made there under shall be complied with, so that the safety of the mine, machinery and persons will be ensured. Permission, relaxation or exemption wherever required for the safe and scientific mining of the deposit will be obtained from the Department of Mine Safety. Copy of Agreement for handling of Explosives under License Holder at Proposed site is given in additional document.

- Safety kits should be located in easily accessible place with major first aid materials in it.
- Entry of any unauthorized person into mine and plant areas shall be completely prohibited
- Arrangements for fire fighting in the mine's office complex and mining area

- Provision of all the safety appliances such as safety boot, helmets, goggles, ear plugs etc. shall be made available for the employees
- Mining will be undertaken in coexistence with the requirements of the Mining Plan which shall be updated from time to time
- Handling of explosives, charging and blasting shall be undertaken only by a competent person
- Adequate safety equipment shall be provided at the explosive magazine

All the mining equipment shall be maintained as per the guidelines of the manufacturer.

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**STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING**

**Stipulated Conditions:**

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. Project proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1<sup>st</sup> day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

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18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. During transportation of sand, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
22. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
23. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
24. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
25. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
26. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
27. Project proponent shall obtain Consent to Operate from the OSPCB 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 State Pollution Control Board.
28. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
29. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.
30. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.



31. 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.
32. 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.
33. 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.

**ESSENTIAL PHYSICAL CRITERIA AS PER ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING, JANUARY 2020 OF MOEF&CC, GOVT. OF INDIA**

Sl. No.	Essential Criteria	Reference
1.	"No Mining Zone": 1/4th the part of the river width (excluding 3/4th the central part of the river width) on both sides of the river towards the river bank	4.1.1 (Para - e) Page - 16
2.	a) Distance between two clusters : $\geq 2.5$ km b) Area of mining lease area is a cluster: $\leq 10$ ha.	4.1.1 (Para - k) Page - 19
3.	Concave River Bank : No extraction of sand	
4.	No mining if a) Upstream: Lease is 1 km from major Bridge and high ways or $5(x)$ of the Bridge / public civil structure / water intakes point subject to lease is located at a minimum 250 meter distance. Where $x =$ Span of the bridge. b) Downstream side: Lease is 1 km from the major bridge and Highways Or $10x$ of the bridge / public civil structure / water intake point Subject to lease is located at a minimum distance of 500 meter where $x =$ span of the bridge	4.3 (Para - h) Page - 23
5.	Mining depth : $\leq 3$ meter (maximum 3 meter)	4.3 (Para - m) Page - 24
6.	Mining distance from river bank: $1/4^{\text{th}}$ of the river width, But subject to not less than 7.5 meter	4.31 (Para - m) Page - 24
7.	Area for removal of minerals : $\leq 60\%$ of mine lease area	4.3 (Para - s) Page - 25
8.	Minable sand per ha. Available for actual mining : $\leq 60,000$ MT/Annum	
9.	Regular replenishment study and replenishment rate	

TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR M/S TRISHNA SKYSCRAPER LTD. FOR RESIDENTIAL PROJECT "TSL SPRING CITY" (UNDER VIOLATION CATEGORY) LOCATED AT PLOT NO.- 180/1261,181/1292, KHATA NO. - 86, PLOT NO. 183 & 202, KHATA NO. 125, PLOT NO- 154 (P) & 177 (P), KHATA NO. - 172, PLOT NO. - 178,181 & 180/1291, KHATA NO. 102, PLOT NO. 204, 624, 625/1061, 203/1360 & 182, KHATA NO. -215. THE SITE AREA MEASURES 45,223.24 M<sup>2</sup> & TOTAL BUILT-UP AREA IS 1, 24,121.96 M<sup>2</sup>. THE PP HAS ALREADY CONSTRUCTED 39,483.11 M<sup>2</sup> BUA (~31.81%) AT SITE WITHOUT PRIOR ENVIRONMENTAL CLEARANCE LOCATED AT MOUZA - KANTABADA, BHUBANESHWAR, TAHASIL - BHUBANESHWAR, DISTRICT - KHURDA OF SRI SATYABRATA DHIR- TOR (VIOLATION).

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1. Project description, its importance and the benefits,
2. Project site details (location, toposheet of the study area of 10 km, coordinates, google map, layout map, land use, geological features and geo-hydrological status of the study area, drainage),
3. Land use as per the approved Master Plan of the area, Permission/approvals required from the land-owning agencies, Development Authorities, Local Body, Water Supply & Sewerage Board, etc.,
4. Land acquisition status, R&R details,
5. Forest and Wildlife and eco-sensitive zones, if any in the study area of 10 km - Clearances required under the Forest (Conservation) Act, 1980, the Wildlife (Protection) Act, 1972 and/or the Environment (Protection) Act, 1986,
6. Baseline environmental study for ambient air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> & CO), water (both surface and ground), noise and soil for one month (except monsoon period) as per MoEF&CC/CPCB guidelines at minimum 5 locations in the study area of 10 km,
7. Details on flora and fauna and socio-economic aspects in the study area
8. Likely impact of the project on the environmental parameters (ambient air, surface and ground water, land, flora and fauna and socio-economic, etc.)
9. Source of water for different identified purposes with the permissions required from the concerned authorities, both for surface water and the ground water (by CGWA) as the case may be, Rain water harvesting, etc.
10. Waste water management (treatment, reuse and disposal) for the project and also the study area,
11. Management of solid waste and the construction & demolition waste for the project vis- vis the Solid Waste Management Rules, 2016 and the Construction & Demolition Rules, 2016,
12. Energy efficient measures (LED lights, solar power, etc.) during construction as well as during operational phase of the project,
13. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or

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an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

14. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
15. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
16. **The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.**

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. ORISSA BRIDGE AND CONSTRUCTION CORPORATION LIMITED FOR CONSTRUCTION OF DHARMASAL AS [G+3 STORIED BUILDING CONSISTING 5 BLOCKS(1,2,3,4 & 5), WHERE BLOCK-1 IS COMING UNDER 'RESIDENTIAL" HOTEL (A-5) & BLOCK-2,3,4& 5 IS COMING UNDER "RESIDENTIAL" (LODGING & ROOMING HOUSES) OVER AN BUILT-UP AREA -38989.57 M2 AT BASELISAH I IN THE HERITAGE CITY OF PURI UNDER ABHADA SCHEME ON TURNKEY BASIS, OVER PLOT NO. 12,13 & 14, MOUZA-PURI SAHARA, UNIT NO.-2, MARKENDESWARA SAHI, DIST-PURI OF SRI SUNDARA MADHABA PADHI - EC.

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PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting 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 362 KLD.
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 46 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 480 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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
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<sup>2</sup> of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 11415 sqm (25.14 %) 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(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply,

sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

#### **PART B – GENERAL CONDITIONS**

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

within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
12. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR OF BHUBANESWAR DEVELOPMENT AUTHORITY FOR CONSTRUCTION OF B+S+9 STORIED COMMERCIAL/ RESIDENTIAL APARTMENT CONSTRUCTION WITH BUILT-UP AREA FOR THE PROJECT WAS 17923 SQ.M. AT PRESENT WITH PARKING AREA OF 7477 SQ.M THE TOTAL BUILTUP AREA IS NOW 25400 SQ.M I.E > 20,000 SQ.M AT BHAGABANPUR MOUZA, BHUBANESWAR, KHORDHA OF SRI LOKANATH PRASAD MOHAPATRA – EC (VIOLATION CASE)**

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**PART A - SPECIFIC CONDITIONS:**

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting 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 70 KLD.

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 6 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 100 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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
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<sup>2</sup> of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 1260sqm (21 %) 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.

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