PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 01ST FEBRUARY 2024

The SEAC met on 01stFebruary 2024 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship (Working) of Prof. (Dr.) B.K. Satpathy. The following members were present in the meeting.

1.	Prof. (Dr.) B.K. Satpathy	-	Chairman (Working)
2.	Dr. K. Murugesan	-	Member Secretary
3.	Dr. Rabi Narayan Patra	-	Member
4.	Prof. (Dr.) H.B. Sahu	-	Member (through VC)
5.	Prof. (Dr.) Abanti Sahoo	-	Member (through VC)
6.	Er. Fakir Mohan Panigrahi	-	Member
7.	Er. Kumuda Ranjan Acharya	-	Member
8.	Shri Jayant Kumar Das	-	Member
9.	Dr. Ashok Kumar Sahu	-	Member
10.	Dr. K. C. S Panigrahi	-	Member (through VC)

Draft proceedings of the meeting was finalized by the members through e-mail and final proceedings of the meeting was confirmed by the members through e-mail. The agenda-wise proceedings and recommendations of the committee are detailed below.

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR AMBAPUA SAND QUARRY OVER AN AREA OF 15.758 ACRES OR 6.377 HA. IN THE VILLAGE - AMBAPUA, TAHASIL BELLAGUNTHA IN DISTRICT GANJAM OF SRI SUNIL KUMAR MOHANTY – EC (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 2 SAND QUARRIES (TOTAL CLUSTER AREA 11.7898 HA.)

1. The proposal is for Environmental Clearance of Ambapua Sand Quarry over an area of 15.758 acres or 6.377 ha. in the village Ambapua, Tahasil- Bellagguntha in District - Ganjam of Sri Sunil Kumar Mohanty (submitted under cluster approach with consisting of 2 sand quarries (total cluster area 11.7898 ha.).
2. **Category**: As per the EIA notification, 2006 and its subsequent amendments, proposed project falls in category ' B' under schedule of Item 1(a)-Mining of minerals.
3. Mining Lease granted by vide letter no. 1065 on dated 21/03/2022. The Successful Bidder is Sri Sunil Kumar Mohanty, S/o Ramesh Chandra Mohanty, At – LIC Colony, 2nd Lane Bhanjanagar, Dist. Ganjam, Odisha.
4. The Mining Plan of Ambapua Sand Quarry Mining Project has been approved by DDG & A.O. O/o Directorate of Geology, Bhubaneswar, Odisha vide Memo no. 1699 /DG Dated 02.03.2019.
5. There is another quarry within 500 m of proposed quarry i.e., Kokalunda Sand Quarry.
6. **TOR details**: The Terms of Reference (TOR) letter was issued by SEIAA, Odisha vide letter No.4559/SEIAA on dated 19.05.2022.
7. **Public hearing details**: Public Hearing was conducted on 30th November 2022 at 11.00 A.M at Ambapua Village, over the Govt. Land in Khata no.-696, Plot no.-375/2256 which is near to Gram Panchayat office Ambapua under Bellagguntha

Jnayak
Environmental Scientist, SEAC

Tahasil of Rayagada District. Issues raised during public hearing are - Plantation, tarpaulin covers on transporting vehicles, Govt. should regulate the cost of sand, control pollution, maintenance of roads, District Administration should reduce royalty and price of sand, development of Lord Shiva temple, mining of sand shall not be allowed within 100 meters from bridge.

8. **Location and connectivity**: The mine lease area is located in Village- Ambapua, Tahasil-Bellaguntha, District - Ganjam, is on Khata No.694, Plot No. 01, 71, 71/2179 & 1289 of Kisam 'Nadi' covered in the Survey of India Topo Sheet No – 74A/9. The geo coordinates of the lease area is: Latitude- 19°51'40.06"N to 19°52'43.64"N, Longitude- 84°38'23.25"E to 84°39'19.60"E. It consists of 4 Patches. The nearest distance of approach road is 0.4 Km. The Nearest National Highway is at NH- 157 at a distance of 5.70 Km in SW. The Nearest State Highway is at SH-30 at a distance of 2.50 Km in East direction. The Nearest Airport is Biju Patnaik International Airport 130Km in NE. The Nearest River is Burha River on which the sand project lies. The Nearest reserve forest is at Bishnuchakra Reserve Forest at a distance of 4.10 Km in SE. The Nearest Road Bridge is just passing adjacent to the lease area. The Nearest River Embankment is just adjacent to the lease area.
9. **Reserves and production**: The total Mineable Reserves is 9105 cum and the Proposed Production for the Proposed Project is 1810cum /year.
10. **Replenishment study**: The Replenishment Study is carried out in Drone method for the pre-monsoon in May 2023 & for the post-monsoon in November 2023. As it is a new mine no excavation has done yet, so the volume of sand available after post monsoon is around 24130 m^3, which can be treated as safe extractable within the framework of the study after arrival of river level. So, total minable reserve available for the next year is 24130 m^3 whereas, approved production capacity for the year is 1810 m^3. Replenished sand of 0.8 meters in Ambapua Sand Bed was observed.
11. **Mining method**: Mining will be done by Manual method with a total production -1810 cum/annum with mining depth of 0.5 Meter. Transportation of minerals will be carried out through an approach road of approx.1775 m which further connects to SH- 30.
12. **Water requirement**: Total Water Requirement will be 12.00 KLD for proposed project and 15.70 KLD for Cluster.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lpcd per labor 10*10/1000= 0.10 KLD	0.10
Dust Suppression	**Total approach road to be water sprinkled** = 2205 m 2205 m*6m*0.5 *2 times/1000= 13.23 KLD	13.23
Plantation	1180 plant (during plan period) @ 2 L/per plant= 1180*2lts= 2360/1000= 2.36 KLD	2.36
Total		**15.69 ~ 15.70**

13. **Baseline study details**: Baseline Study was conducted during March, 2022 to May, 2022.
14. **Greenbelt development**: 640 plants are proposed as greenbelt for the proposed project.

S. No.	Name of the Quarry	Number of Plants	Total

Jnayak
Environmental Scientist, SEAC

1	Ambapua Sand Bed - Proposed Quarry	640	1180
2	Kokalunda Sand Bed - Existing Quarry	540	

15. **Project cost**: The estimated project cost is 20 lakhs for the proposed project and for the cluster is 40 lakhs. The EMP cost incurs Capital cost of 8.87 Lakhs and Recurring cost of 7.72 Lakhs.

Table: Budget of EMP (For Cluster)

Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling	--	4,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 20,000 10,000
3.	Green belt development	2,36,000	1,00,000
4.	Maintenance of haul road	5,51,250	1,32,000
5.	Development of Lord Shiva temple	1,00,000	20,000
Total		**8,87,250**	**7,72,000**

Table: Budget of CER

Sl. No.	Activity	Capital Cost (in Rs.)/annum
1.	Financial aid for medical camp in Ambapua village. @ Rs. 20,000/ camp (2 camp in a year)	40,000
2.	Skill development program camps like computer learning, sewing etc. in Ambapua village. @Rs 20,000/trainer (2 trainer)	40,000
TOTAL		**80,000**

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

17. **The SEAC observed the following**:

(i) Ambapua Sand Quarry is a new mine.

(ii) Replenishment Study report lacked accuracy in measurement in X, Y,Z direction w.r.t to camera and Ground Control Points as per the SOP guidelines laid down by ORSAC.

(iii) Since it's a new mine and mining has not been carried out, the replenishment study report conducted lacked accuracy in measurement.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P & M Solution, Noida** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Ambapua Sand Quarry (under cluster approach) without referring to SEAC with

Jnayak
Environmental Scientist, SEAC

stipulated conditions as per **Annexure – A** after receipt of individual applications from the lessee in cluster along with following documents.

i) Filled in form-I of individual lease

ii) Prefeasibility report of individual lease

iii) EMP of individual lease.

iv) Approved Mining Plan of individual lease.

v) Previous production details of individual lease duly certified by Tahasildar.

vi) Replenishment Study Report of individual lease.

b) Following specific conditions may be stipulated in individual Environmental Clearance.

i) Amended EIA Notification dated 25th 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 – B**.

ii) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

iii) 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.

iv) Provision of Bio-toilet shall be made at the site.

v) 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.

vi) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR MANKIDIA "KA" SAND QUARRY OVER AN AREA OF 8.093 HA. IN MOUZA - MANKIDIA UNDER JALESWAR TAHASIL, DISTRICT- BALASORE OF SRI SUSANTA KUMAR SAHOO – EC

1. This proposal is for Environmental Clearance of Mankidia "Ka" Sand Quarry over an area of 8.093 ha. in Mouza – Mankidia, under Jaleswar Tahasil, District- Balasore of Sri Susanta Kumar Sahoo.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The lease is granted to the Successful Bidder Sri Susanta Kumar Sahoo resides, At/PO – Patharpura in the district of Balasore for a lease period of 5 (five) years by Tahasildar, Jaleswar vide letter no – 5501 on dated 21.12.2020.
4. The Mining plan has been approved for a period of five years by the Mining Officer, Baripada vide letter no – 283/Mines, on dated 29.01.2021 in favour of Tahsildar, Jaleswar.

Jnayak
Environmental Scientist, SEAC

5. The said sairat source is present in Annexure – I, Sl. no – 17 of DSR Report approved by Collector, Balasore.
6. This is a new mine and there are no other minor mineral lease located within 500 m from the periphery of the said lease.
7. **TOR details**: Terms Of Reference (TOR) was granted by SEIAA vide Letter no. - 1267/SEIAA (File no. SIA/OR/MIN/61167/2021) on dated 09.04.2021.
8. **Public hearing details**: Public hearing was conducted on 05.08.2023 at 10.0 AM at Gram Panchayat office premises, Mankidia under Jaleswar Tahasil in Balasore district, Odisha. Issues raised during public hearing are environment protection, plantation, protection of the entire embankment over Subarnarekha River at Mankidia, repairing & maintenance of the haulage road passing through the Mankidia village, restricted vehicle movement on the village road and safety of the school going children on this road.
9. **Location and connectivity**: The proposed project is located at Plot no – 1, Khata no – 818, Mouza – Mankidia, Tahasil – Jaleswar, Dist – Balasore, Odisha. The geo coordinates of lease area is:Latitude: $21^0$56'.21" N to $21^0$56'32.2" N, Longitude: $86^0$14'13.8"E to $86^0$14'28.4" E and find place in Topo sheet No. - 730/1 with Kissam - Non-forest Govt. land of Nadi kissam. The Lease area is accessible from Dantan village road at a distance of 8.7 km, which is well connected to Main roads and Highways. The nearest major railway station is Dantan at distance 8.7 Km from the lease area. Bhubaneswar Airport is 250.0 Km away from the project site. There is no any eco sensitive zone situated within 10Kms from the lease area.
10. **Total Reserves and proposed production**: As estimated, the total geological resource has been estimated as 2,02,325 cum. Similarly, the mineable reserve of riverbed sand is worked out to be 1,78,528 cum with a proposed production of 60000 cum/annum.

YEAR	PRODUCTION (M^3)
1^{ST} YEAR	60,000
2^{ND} YEAR	60,000
3^{RD} YEAR	60,000
4^{TH} YEAR	60,000
5^{TH} YEAR	60,000
TOTAL	**3,00,000**

11. **Replenishment study details**: The Study was carried out for pre-monsoon data on 16.06.2022 and post monsoon data on 12.05.2023 by using UAV/ Drone method as per the SSMG, 2020. As, per ha calculation, 11055m^3 sand replenished. However, proper rate of replenishment can be determined only after operation of mine.
12. **Mining method**: The mining of sand will be done by open cast manual method for excavation & then loading into dumpers/ tractors/tippers for transport to the user's destination. The maximum depth of mining will be of 2.5 m or up to water table whichever is less. Mining will be carried out in lean period only; during monsoon the mining will be stopped.
13. **Water requirement**: The total water requirement is approx, 1.0KLD will be required for different purposes like domestic, dust suppression, plantation purposes & sourced from as per the availability.

Environmental Scientist, SEAC

14. **Baseline study details**: Study Period was Dec' 2021 to Feb' 2022 (Winter Season) with 6 monitoring station for Air quality & Noise level monitoring, 4 sampling location for ground & surface water quality monitoring and 4 stations for soil quality has been monitored. The results are well within limit of statutory norms.

    - Surface water quality: pH values varied between 6.9 to 7.3, Turbidity – 12.5 to 14.5 NTU, Dissolved Solids -98 to 115 mg/L, Dissolved oxygen - 6.2 to 7.1 mg/L, BOD - 1.4 to 1.8 mg/L.
    - Ground water quality: pH values varied between 6.9 to 7.2, Turbidity – 2.6 to 2.9 NTU. Dissolved Solids - 98 to 118 mg/l , total hardness - 82 to 96 mg/l. Chloride values - 7 to 10.6 mg/l. Calcium - 17.2 to 17.9 mg/l , Magnesium - 8.8 to 10 mg/l.
    - Noise levels: Noise level varies from 36 to 52 dB (A) during Day time and 28 to 43 dB (A) during Night time, which are below the prescribed limits of CPCB.
    - Soil quality: Soil samples were collected from 4 locations within the study area Texture of soil within the study area is sandy silt to sandy loam. Soil of the study area is slightly acidic in nature. The bulk density of soil samples varies from 1.35 to 1.56 gm/cm^3. Porosity varies from 33 to 50 %.

15. **Greenbelt development**: 100 saplings per annum will be carried out in the road side.

16. **Manpower requirement**: 1(one) number of supervisory personnel preferably Mining Mate with Certificate of Competency from DGMS, 1 statutory personnel will be employed. As per OMS, 4nos. skilled, 6nos. semi-skilled and 73nos. unskilled persons will be employed.

17. **Project cost**: Total cost of the project is 30.0 Lakhs. A capital cost of 7.0 lakhs is proposed as EMP cost (including CER cost of 3.0 lakhs) & 2.0 lakhs as EMP recurring cost.

EMP BUDGET		
Particulars	**Capital Cost (Rs. in Lakhs)**	**Recurring Cost (Rs. Lakhs/Annum)**
Environmental Monitoring	3.0	0.5
Environmental Management		1.0
Green belt development	1.0	0.5
Sub - Total	**4.0**	**2.0**
CSR	3.0	--
Total	**7.0**	**2.0**

CER BUDGET	
Category	**Cost in Lakh**
Provide drinking water facility in surrounding villages	0.50
Medicine distribution/Health check up	0.50
Repair of Roads	1.50
Sports & Education	0.50
Total	**3.0**

18. **Environment Consultant**: The Environment consultant **M/s Srushti Seva Private Limited, Nagpur** along with the proponent made a presentation on the proposal before the Committee.

JNayak
Environmental Scientist, SEAC

Considering the information furnished and the presentation made by the consultant, **M/s Srushti Seva Private Limited, Nagpur,** 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 – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B.**

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) 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.

d) Provision of Bio-toilet shall be made at the site.

e) 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.

f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

g) No natural water course shall be obstructed or diverted for the purpose of sand mining.

h) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KUSHABHADRA RIVER SAND QUARRY, KESURA OVER AN AREA OF 16.25 HA. IN VILLAGE - KESURA UNDER BHUBANESWAR TAHASIL OF KHORDHA DISTRICT OF SRI SIKHARA JENA – EC

1. This proposal is for Environmental Clearance of Kushabhadra River Sand Quarry, Kesura over an area of 16.25 Ha. in Village - Kesura under Bhubaneswar Tahasil of Khordha District of Sri Sikhara Jena.
2. **Category:** As per the EIA notification 2006, and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The quarry lease Kushabhadra River Sand Quarry, Kesura has been granted by the Tahasildar Bhubaneswar to Sri Sikhar Chandra Jena (Successful Bidder) vide letter no 12761 dated on 08.08.2022for excavation of minor mineral (River Sand) for five years.
4. As per the Director of Geology, Odisha, the modification of mining plan has been approved vide memo no. 5517/DG on dated 16.09.2021 for Kushabhadra Sand Quarry.
5. This is a new mine and as per the approved DSR the said sand mine is in the page no. 22 and Sl no. 17.
6. **TOR details**: Terms of Reference (TOR) was granted by SEIAA vide proposal no: SIA/OR/MIN/81256/2022**on** dated 11.11.2022.
7. **Public hearing details:** The Public Hearing meeting held on dated 09.07.2023 at 11.00 am at Antarjami High School under Bhubaneswar Tahasil of Khordha district, Odisha. Issues raised during public hearing are development of road condition from river

Environmental Scientist, SEAC

embankment to village road and finally up to main road for easy movement of vehicles, suppression of fugitive dust during transportation of sand carrying vehicles, declaration of sand extraction with death for restoration of ground water level, prohibition of transportation of sand loaded vehicle during night time, safe driving of loaded vehicle nearby the School area within village road and providing safety to the life of school going children i.e. lease to keep vigilant on the vehicle movement, preference to be provided for employment facility to the local labour class people during mining period ,Playground of the village children to be protected near river side and road from embankment up to main road via village road should be widened. The public hearing issues will be addressed and a time bound action plan has been prepared in compliance to the issues raised by public. A cost of Rs. 8.85Lakhs has been allocated for implementation of activities proposed during public hearing.

8. **Location and connectivity**: The proposed project is located at village Kesura under Bhubaneswar Tahasil of Khordha District, Odisha. The project site is located in Survey of India Toposheet no. F45T15 and bounded between the latitudes of 20°15'59.7"N to 20°16'41.20"N and longitudes of 85°52'58.80"E to 85°53'10.80"E and comes under Nadi Kissam bearing Khata no. 549 and plot no 1000. The Nearest Railway station is Bhubaneswar Railway station at a distance of 4.2 Km W from the project site. The site is well connected to NH-316, at a distance of 1.40 Km W & SH-60 at a distance of 8 Km NE. The nearest sanctuary is Nandan Kanan wildlife sanctuary is situated 15km distance from the lease area.

9. **Total Reserves and proposed production**: As estimated, total Geological reserve of lease area is 840480m^3 and total mineable reserve of lease area is 450000m^3. Production per annum is 90000 $m^3$and total production in 5 years is 450000 m3.

Year	Vol. of Sand in m^3
1st	90000
2nd	90000
3rd	90000
4th	90000
5th	90000
Total	**450000**

10. **Replenishment study details:** The field survey and data generated for the pre and post monsoon survey have been done and analyzed with the help of standard engineering and mining software. The 1st survey i.e pre monsoon replenishment study has been carried out on 10th June 2023 and the post monsoon study has been carried out 04th November 2023.Considering a common safe workable area of 4024m^2 it is observed that replenishment of 1429 m^3 has been done with an average thickness of 0.35m. The volume of sand available during post monsoon survey around 10302 m^3 over a small patch of land of 8622 m^2 which is very less as the major part of the sand patch is submerged with water and can be treated as submerged sand. However, with advancement of summer, the water level will fall and the submerged sand will be exposed for mining and resulting in increase in safe workable area and accordingly, the quantum of extractable sand will also enhance to the to the tune of 11000 m^3 per annum and the annual production is proposed at around 11000cum.

11. **Mining method**: Mining will operate in semi mechanized method. Total Production in per year is 90000 cum. The mining activity will carry out up to a maximum depth of 3m below

Jnayak
Environmental Scientist, SEAC

the surface level. Equipments like Excavator for excavation of sand and (Haiwa /Trucks/Tractors) for transport of sand will be used in the sand mine.

12. **Water requirement**: The total requirement of water will be 5 KLD. Out of which only 3 KLD of water to be used for domestic purpose; 0.5 KLD towards green belt development and 1.5 KLD water to be used for the purpose of water sprinkling for dust suppression.

13. **Baseline study details**: Baseline Study conducted in the period December 2022 to February 2023.

    - **Ambient Air Quality:** During the study period, the concentration of PM10 varies from 42.0 to 66.68µg/m^3; the concentration of PM2.5 varies from 19.1 to 38.63µg/m^3. The concentration of SO_2 varies from 6.0µg/m^3 to 11.1 µg/m^3 and the concentration of NOx within the project site ranges between 11.0-21.7µg/m^3. From the ambient air quality monitoring, it has been found that the concentrations of the particulate matter, SO_2, NOx, are within the NAAQS standard as prescribed by CPCB.

    - **Surface-Water Quality Monitoring:** The water sample were analysed and it is found that pH of samples ranges between 7.5 to 7.7, Electrical conductivity varies from 168 to 178 µs/cm, Chemical oxygen demand varies from 5-13mg/l, Biochemical Oxygen demand varies from 1 to 2.2 mg/l, Total hardness varies from 88 to 96 mg/l, Dissolved oxygen varies from 6.1 to 6.8 mg/l and Total coliform varies from 50-130 MPN/100ml.

    - **Ground-Water Quality Monitoring:** The water sample were analyzed and it is found that pH of samples ranges between 6.5 to 7.3, Total dissolved solid varies from 130 mg/l to 300 mg/l, Fluoride content varies from 0.17 mg/l to 0.44 mg/l, Sulphate 1.9 mg/lto 19 mg/l, Total hardness varies from100- 188 mg/l. The above result shows that ground water is suitable for human consumption. Higher values of turbidity and hardness may require purification of the ground water for drinking purpose.

    - **Noise Environment:** The study area includes industrial and residential areas. The ambient noise levels were measured in 6 sampling locations. In the project site the day time noise level is 44.6 dB (A) and the night time noise level is 32.4dB (A). The maximum noise level is 48.3dB (A) during the day time at Pandra village and minimum noise level is 33.6 dB (A) during the night time at Bankual Village.

14. **Greenbelt development**: The green belt is proposed to be developed in a width of 7.5 m in safety zone along the boundary of mine lease area covering 2.190 ha and along the roadside. An amount of Rs.1,00,000 has been allocated for development of greenbelt.

Sl. No.	Year	No. of Saplings proposed for Krushabhadra River Sand Quarry	Area covering in Ha.	Type of saplings
1.	1st Year	1000	Plantation will be carried out safety zone of the Lease area (River Bank)	Teak, Mango, Jammu, Neem, Jhaun etc.

JNayak
Environmental Scientist, SEAC

15. **Manpower requirement**: Due to the proposed sand mining, there will be generation of employment for 104 persons in sand mines. Out of these 15 nos are skilled,35 semiskilled, 53nos are unskilled.

16. **Project cost**: The total cost of the project is Rs. 30 lakhs and the updated capital cost and recurring cost (per annum) for the environmental facilities for the proposed mining project works out to be Rs. 4.50 lakhs.

Sl. No.	Particulars	Cost/ Annum (in Lakhs)
1.	Environmental Monitoring: Air, Noise 3 Point each and Water 2 points (Twice yearly)	Rs. 1.00
2.	Water sprinkling on the haul road& maintenance of the transporting road	Rs.2.00
3.	Green belt development in river bank	Rs. 1.00
4.	Occupational health	Rs. 0.50
Total		Rs. 4.50

17. **Environment Consultant**: The Environment consultant **M/s Kalyani Laboratories Private Limited, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee.

18. The SEAC recommended the following:

A. **The proponent may be asked to submit the following for further processing of EC application:**

i) Submit Traffic study report.

ii) Comparative table to be submitted w.r.t the level of accuracy of measurement in X, Y, Z direction of the camera and Ground control points and as per the SOP guidelines laid down by ORSAC for Drone method.

iii) Clarification how replenishment study was carried out when 80% of the lease area is covered under water.

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

a) Environmental settings of the project site.

b) Availability of sand.

c) Road connectivity to the lease area.

d) Present condition of lease area, as in KML file, it is observed that 80% of the lease area is covered under water.

e) Any other issues including local issues

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BAITARINI SAND BED, AMARANGA OVER AN AREA OF 12.95 HA. AT MOUZA - AMARANGA UNDER ANANDAPUR TAHASIL OF KEONJHAR DISTRICT OF SRI SANATAN SAMAL - EC

1. This proposal is for Environmental Clearance of Baitarini Sand Bed, Amaranga over an area of 12.95 ha. at mouza - Amaranga under Anandapur Tahsil of Keonjhar district of Sri Sanatan Samal.

Jnayaki
Environmental Scientist, SEAC

2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The lease is granted to the Successful Bidder Sri Sanatan Samal resides, At – Anandapur in the district of Keonjhar for a lease period of 5 (five) years vide letter no – 667 on dated 01.02.2021.
4. The Mining plan has been approved for a period of five years vide letter no. - 3482/CZ, on dated 28.12.2020.
5. This is new auction of existing mine. As per the approved DSR the said sand mine is in Annexure – II, Sl. No –36 of DSR Report approved by Collector, Keonjhar on dated 28.01.2020.
6. **TOR details**: Terms of Reference (TOR) was granted by SEIAA vide Letter no. - SEIAA/2021/209/579-81 (File no. SIA/OR/MIN/62500/2021) on dated 19.07.2021.
7. **Public hearing details:** Public hearing was conducted on 20.10.2022 at 11.0 AM at Khata no – 103, Plot no - 606 of Amaranga village in Keonjhar district, Odisha. Issues raised during public hearing are provision of water sprinkling on haul roads during mining operation, venue plantation to be carried out along the transportation road and provision of livelihood for local villagers in sand mining.
8. **Location and connectivity**: The proposed project is located at Plot no – 1315, Khata no – 240, Mouza – Amaranga, Tahsil – Anandapur, Dist – Keonjhar, Odisha bounded by geo-co-ordinates Latitude: 21018'47.1" to 21019'7.0" N and Longitude: 86004'20.8" to 86005'4.0" E bearing Topo Sheet No. - F45 O/3 with Kissam - Non-forest Govt. land of Nadi kissam. Nearest railway station Sagadapata at distance 20 km.
9. **Total Reserves and proposed production:** As estimated, the total geological resource is 129500 Cum and Mineable Reserve – 1,03,250 Cum with proposed production of 20650 Cum/Annum.

YEAR	PRODUCTION (M^3)
1ST YEAR	20,650
2ND YEAR	20,650
3RD YEAR	20,650
4TH YEAR	20,650
5TH YEAR	20,650
TOTAL	**1,03,250**

10. **Replenishment study details:** The Study was carried out for pre-monsoon data on 10.06.2023 and post monsoon data on 02.11.2023 by using UAV/ Drone method as per the SSMG, 2020. In view of the Replenishment study, it is estimated that, total 5504-bs m^3 of sand of with an average thickness of 0.29 m has been replenished during last monsoon season.

	Safe workable Area in m^2	Volume (m^3)
Pre-monsoon Survey	27,990	50,087
Post-Monsoon Survey	31,992	67,034

11. **Mining method**: The mining of sand will be done by open cast manual method for excavation & then loading into dumpers/ tractors/tippers for transport to the user's

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destination. The maximum depth of mining will be of 1.0 m or up to water table whichever is less. Mining will be carried out in lean period only; during monsoon the mining will be stopped.

12. **Water requirement**: Total water requirement is approx, 1.0 KLD will be required for different purposes like Domestic, Dust suppression, plantation purposes & sourced from as per the availability.

13. **Baseline study details**: Baseline Study Period was Oct' 2021 to Dec' 2021 (Post-Monsoon Season) with 8 monitoring station for Air quality & Noise level monitoring, 4 sampling location for ground & surface water quality monitoring and 4 stations for soil quality has been monitored. The results are well within limit of statutory norm.

- **Surface water quality**: pH values varied between 7.2 to 7.4, Turbidity 10.8 to 12.2 NTU, Dissolved Solids 158 to 258 mg/L, Dissolved oxygen 6.4 to 7.2 mg/L, BOD varied from <1.8 mg/L. Surface water results were compared with IS 2296:1992 standard and in respect of CPCB and found well within limit.
- **Ground water quality**: pH values varied between 6.1 to 7.1, Turbidity - 3.2 NTU to 4.3 NTU. Total Dissolved Solids -118 mg/l to 147 mg/l, Total hardness - 95 mg/lto 137 mg/l. Chloride values 35.4 mg/l to 45.6 mg/l. Calcium 11.7 to 14.2 mg/l, Sulphate values varied from 20 mg/l to 25 mg/l and Nitrate values varied from 7.9 to 9.6 m/l.
- **Noise levels**: Noise level varies from 48 to 53 dB (A) during Day time and 40 to 43 dB (A) during Night time, which are below the prescribed limits of CPCB.
- **Soil quality**: Soil samples were collected from 4 locations within the study area. Texture of soil within the study area is sandy silt to sandy loam. Soil of the study area is slightly acidic in nature. The bulk density of soil samples varies from 1.38 to 1.66 gm/cm^3 porosity varies from 32 to 42.5 %.

14. **Greenbelt development**:250 Plantation will be carried out in the roadside.

15. **Manpower requirement**:4 number of supervisory personnel preferably Mining Mate with Certificate of Competency from DGMS will be employed. As per OMS, 5nos. skilled, 7 nos. semi-skilled and 21nos. unskilled persons will be employed.

16. **Project cost**: Total cost of the project is Rs. 30.00 Lakhs. A capital cost of Rs. 5.0 lakhs is proposed as EMP cost (including CER cost of Rs. 2.0 lakhs) & Rs. 1.0 lakhs as EMP recurring cost.

EMP BUDGET		
Particulars	**Capital Cost (Rs. in Lakhs)**	**Recurring Cost (Rs. Lakhs/Annum)**
Environmental Monitoring	1.0	0.3
Environmental Management	1.5	0.5
Green belt development	0.5	0.2
CRS	2.0	--
TOTAL	**5.0**	**1.0**

CER BUDGET	
Category	**Cost in Lakh**
Provide drinking water facility in surrounding villages	0.5
Medicine distribution / Health check up	0.3
Repair of Roads	1.0

Jnayak
Environmental Scientist, SEAC

Sports & Education	0.2
TOTAL	**Rs. 2.0**

17. **Environment Consultant**: The Environment consultant **M/s Srushti Seva Private Limited, Nagpur** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Srushti Seva Private Limited, Nagpur,** 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 – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B**.

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) 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.

d) Provision of Bio-toilet shall be made at the site.

e) 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.

f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

g) No natural water course shall be obstructed or diverted for the purpose of sand mining.

h) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

However, EC shall be granted for this proposal, after submission of following documents in SEIAA.

i. A recent geotagged photograph of the lease area when there is no water logged.

ii. NOC from concerned DFO regarding the Elephant Corridor.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR HALDI SAND QUARRIES SUBMITTED UNDER CLUSTER APPROACH OVER AN TOTAL CLUSTER AREA OF 37.06 ACRES/ 14.997 HA. IS LOCATED IN VILLAGE - HALDI, TAHASIL - NUAPADA IN DISTRICT – NUAPADA OF TAHASILDAR, NUAPADA – EC (HALDI SAND QUARRIES CLUSTER CONSISTS OF 3 (THREE) NOS. OF INDIVIDUAL SAND MINING LEASES I.E HALDI SAND QUARRY-01 (5.0 HA./ 12.355 ACRES), HALDI SAND QUARRY-02 (5.0 HA./ 12.355 ACRES), HALDI SAND QUARRY-03 (4.997 HA./ 12.35 ACRES).)

1. This proposal is for Environmental Clearance of Haldi Sand Quarries submitted under cluster approach over an total cluster area of 37.06 acres/ 14.997 Ha. is located in village - Haldi, Tahasil - Nuapada in District – Nuapada of Tahasildar, Nuapada (Haldi Sand Quarries cluster consists of 3 (three) nos. of individual sand mining leases i.e Haldi Sand Quarry-01 (5.0 Ha./ 12.355 Acres), Haldi Sand Quarry-02 (5.0 Ha./ 12.355 Acres), Haldi Sand Quarry-03 (4.997 Ha./ 12.35 Acres).

Jnayak
Environmental Scientist, SEAC

2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The Mining Leases Haldi Sand Quarry-1, 2 & 3 will be auctioned and leased out to the Successful Bidders, presently applicant for these quarries is TahasildarNuapada. TahasildarNuapada, At/PO- Nuapada, Odisha.
4. The Mining Plan has been approved by Government of Odisha, Office of the Joint Director of Geology, Zonal Survey, Balangir for Haldi-1 Vide letter no.-1238 Dated 28.11.2019, Haldi-2 Vide letter no.- 1783 Dated 31.08.2020 & Haldi-3 Vide letter no.- 1785 Dated 31.08.2020.
5. Mining lease is an identified sairat source shown in Annexure – II , page no – 8, Serial no – 1 of the Nuapada district.
6. Haldi Sand Quarry 1, 2 & 3 is Cluster Mining Project. The 3 quarries i.e., Haldi -1 is 72 m away from Haldi -2 & Haldi-3 is 90 m away from Haldi-1 & Haldi-3 is 162 m away from Haldi-2 respectively.
7. **TOR details**: Terms Of Reference (TOR) was granted by SEIAA vide File No.- 403213/339-MINB1/04-2023 Dated 27.06.2023.
8. **Public hearing details:** Public hearing was conducted on Date- 16.11.2023, place- Dumerpani Gram Panchayat Office of Nuapada district. Issues raised during public hearing are to develop the connectivity/approach road by RD Department, widening of road , road which will be used for the transportation of the sand during the operation of the Sand Bed, school children should not be affected by the heavy vehicle,engage local labourers etc. An amount of Rs. 3,50,000 will be incurred for the action plan of public hearing.
9. **Location and connectivity**: The proposed project is located at Khata no.-175, plot no.- 117 & 135(Haldi-1), Khata no.-175, plot no.-135(Haldi-2) & Khata no.-175, plot no.-1,(Haldi-3) in Village- Haldi, Tahasil- Nuapada, District- Nuapada, State- Odisha bounded by geocoordinates: Latitude– (Haldi-1) 20°50'42.69"N to 20°50'48.41"N, (Haldi-2) 20°50'49.10"N to 20°50'54.42"N & (Haldi-3) 20°50'32.82"N to 20°50'31.26"N and Longitude– (Haldi-1) 82°28'09.59"E to 82°28'18.05"E, (Haldi-2) 82°28'20.33"E to 82°28'32.04"E & (Haldi-3) 82°27'55.13"E to 82°27'57.41"E bearing Toposheet No.- F44W5 with Kisam of land- Nadi. The Nearest NH is NH-353 is 4.3 km in E direction and SH-3 is 7.6 km in SE direction. The Nearest Airport is Swami Vivekananda Airport, Raipur is 84 km in WNW direction and Nearest Railway Station is Khariar Road railway station is 6.6 km in NE direction.
10. **Total Reserves and proposed production**: As estimated, the total geological reserve has been estimated as 69,316 m^3 and mineable reserve is 59,660 m^3 with proposed production of Haldi-1 (10,000Cum/Year, in the last year 4,168Cum/Year), Haldi-2 (10,000 Cum/Year) & Haldi-3 (15,000Cum/Year) for 5 Years.
11. **Replenishment study details**: Replenishment study has been done in Drone method. Pre-monsoon Survey was carried out on 12.05.2023 and Post- monsoon Survey was carried out on 16.11.2023. Considering all the mining constrains of a total safe workable area the volume of sand computed as below. The volume of sand available with an average of mRL 313.91 for Haldi Sand Quarry-1, 313.27 for Haldi Sand Quarry-2 and 310.91 Haldi Sand Quarry-3after the Pre- Monsoon Survey. The volume of sand available with an average mRL 314.21 for Haldi Sand Quarry-1, 313.65 for Haldi Sand

Jnayak
Environmental Scientist, SEAC

Quarry-2 and 311.30 Haldi Sand Quarry-3 with a height of 0.30, 0.38 & 0. 39 m for the quarries after the post-monsoon survey.

12. **Mining method**: Mining Method for the proposed project is Opencast Manual Method with the average production from the 3 nos. Quarries which is proposed to be 35,000 Cum/Year & 1,59,168 Cum/Year is the total production during plan period. The average production of the Haldi-1 (10,000 Cum/Year for 3 years and 4th year production is 4,168 Cum/Year & 34,168 Cum is the total production) & 34,168 Cum/Year is the total production), Haldi-2 (10,000 Cum/Year & 50,000 Cum/Year is the total production) & Haldi-3 (15,000 Cum/Year & 75,000 is the total production) with mining depth of Haldi-1= 0.8 m, Haldi-2 = 0.5 m & Haldi-3 = 0.5 m.
13. **Water requirement**: Water required for the proposed project is 9 KLD from water tanker (Haldi Sand Quarry-01=3 KLD + Haldi Sand Quarry-02 = 3 KLD + Haldi Sand Quarry- 03 = 3 KLD).
14. **Baseline study details**: Baseline study was conducted from March 2023 to May 2023.
15. **Greenbelt development**:750 number of saplings proposed during plan period will be planted. Plantation work will be carried out at the safety zone and riverbank of the lease area.

Year	No. of Plants	Species
1st Year	750	Teak, Mango, Jammu, Jhaun, Neem etc.
2nd Year	Care / Protection of plants	
3rd Year		
4th Year		
5th Year		
Total	750	

16. **Manpower requirement**:49 Persons (Haldi Sand Quarry-01=15 nos. + Haldi Sand Quarry-02 = 14 nos. + Haldi Sand Quarry- 03 = 20 nos.) will be engaged as manpower for the proposed project.
17. **Project cost**: Total estimated Project cost is 150 Lakhs and EMP cost will be 3.60 Lakhs.

S. No.	Description	Capital Cost (Rs.)	Recurring Cost (Rs.)
A	**EMP Budget for Haldi Sand Quarry – 01**		
1.	Air pollution Control: Dust Suppression/ Water Sprinkling	30,000	1,00,000
2.	Road Maintenance	50,000	60,000
3.	Greenbelt	40,000	25,000

Jnayak
Environmental Scientist, SEAC

4.	Personal Protective Equipment	-	20,000
5.	Environmental monitoring	-	30,000
B	**EMP Budget for Haldi Sand Quarry – 02**		
1.	Air pollution Control: Dust Suppression/ Water Sprinkling	30,000	1,00,000
2.	Road Maintenance	50,000	60,000
3.	Greenbelt	40,000	25,000
4.	Personal Protective Equipment	-	20,000
5.	Environmental monitoring	-	30,000
C	**EMP Budget for Haldi Sand Quarry – 03**		
1.	Air pollution Control: Dust Suppression/ Water Sprinkling	30,000	1,00,000
2.	Road Maintenance	50,000	60,000
3.	Greenbelt	40,000	25,000
4.	Personal Protective Equipment	-	20,000
5.	Environmental monitoring	-	30,000
D	**Addressal of Public Hearing issues**	3,50,000	-
Total = A+B+C+D		**7,10,000/-**	**7,05,000**

18. **Environment Consultant**: The Environment consultant **M/s Parivesh Environmental Engineering Services, Lucknow** along with the proponent made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Parivesh Environmental Engineering Services, Lucknow** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

c) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Haldi Sand Quarries submitted under cluster approach without referring to SEAC with stipulated conditions as per **Annexure – A** after receipt of individual applications from the lessee in cluster along with following documents.

i) Filled in form-I of individual lease

ii) Prefeasibility report of individual lease

iii) EMP of individual lease.

iv) Approved Mining Plan of individual lease.

v) Previous production details of individual lease duly certified by Tahasildar.

vi) Replenishment Study Report of individual lease.

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d) Following specific conditions may be stipulated in individual Environmental Clearance.

i) Amended EIA Notification dated 25th 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 – B.**

ii) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

iii) 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.

iv) Provision of Bio-toilet shall be made at the site.

v) 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.

vi) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. MAX RAMPUR FORTUNES PRIVATE LIMITED FOR SIDINGPADAR QUARTZ MINES OVER AN AREA OF 12.26ACRE OR 4.9617HECTARES IN VILLAGE SIDINGPADAR UNDER M. RAMPUR TAHASIL OF KALAHANDI DISTRICT OF SRI DURGESH KUMAR UMAR VAISHYA - EC

1. This proposal is for Environmental Clearance of M/s. Max Rampur Fortunes Private Limited for Sidingpadar Quartz Mines over an area of 12.26Acre or 4.9617Hectares in village Sidingpadar under M. Rampur Tahasil of Kalahandi District of Sri Durgesh Kumar Umar Vaishya.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. Mining Lease of Sidingpadar Quartz mines was originally executed by Sri Samarendra Pratap Singhdeo over an area 46.50 Acres or 18.817 Hectares on dated 25.08.1980 for 20years upto 24.08.2000.
4. Lessee had applied for renewal of mining lease on dated 21.04.1999 under rule 24 A(I) of M. C. Rules 1960 but the State Govt. rejected the application vide proceeding no 6509/SM dated 10.07.2002.
5. After the long official process the Revisional authority passed the order no 149/2013 dated 29.10.2013 and directed the State govt. to reduce the lease area to 4.990 Hectares. Finally State Govt. has issued letter for preparation of Mining Plan on letter no 4875/SM, dated 06.06.2016.
6. After getting the order for reduced area, the lessee has prepared the mining plan and obtained approval from the approving authority vide letter no. 6313/DM, dated 14.08.2018.

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7. In the meantime State Govt. has extended the validity of lease period for fifty years from the date of execution of the original lease period i.e. up to 24.08.2030 vide proceeding no 6000/SM-MC3-ML-030/2022 dated 09.06.2023.

8. From the original lease area 18.817Hectares, 13.8553Hectares area has been surrendered by the lessee and obtained approval through vide proceeding no. 6000/SM-MC3-ML-0030/2022 dated 09.06.2023.

9. The Transfer of Mining lease from Sri Samarendra Pratap Singhdeo to M/s Max Rampur Fortunes Pvt. Ltd has been executed and registered on dated 17.10.2023 for a period up to 24.04.2030 vide govt proceeding no 9623/SM-MC3-ML-0030-2022 dated 22.09.2023.

10. **Mining lease is now** granted vide letterno-6000, Dt-09.06.2023 to Successful Bidder to M/s Max Rampur Fortunes Pvt. Ltd., Z-508, Royal Green Apartment, Balangir, Odisha-767001.

11. Hence the Scheme of Mining plan has been prepared by the RQP Sri Nihar Ranjan Nayak (RQP/OD/019/2015) and submitted for grant of Environment Clearance.

12. Mining plan is approved by the Joint Director of Mines, Sri Salil Kumar Behera Letter no. -MGXXIV(b)-19/2023/14863/DoMG, Date-13.12.2023.

13. Mining lease is an identified sairat source in the DSR in PageNo-4 of DSR Kalahandi District. There is no other mines located within 500m periphery of the Sidingpadar Quartz Mines.

14. **Location and connectivity**: The proposed project is located at **Plot No. -**231; Kisam- Dunguri & 265 Kisam Bahal in **Village-** Sidingpadar, **Tehsil-**Madanpur Rampur, **Dist-**Kalahandi, **State-**Odisha bounded by geo coordinates Latitude 20°13'40.3"N to 20°13'41.0"N and longitude 83°33'06.8"E to 83°33'06.9"E bearing ToposheetNoF44X12. The Nearest NH 59- 4.24Km, Nearest SH 6A- 4.44Km, Nearest Airport- Utkela Airport-41Km, The Nearest Water Body- 6.84Km, Ramudu Reserve forest- 370m, Road Bridge-6.55Km, Rail Bridge- 27.36Km, riverembankment-7.16Km, electric transmission pole-1.26Km, village road-150m.The NearestHabitation-135m.

15. **Total Reserves and proposed production**: As estimated, the total geological reserve is 95312cum and mineable reserve is 59,736 cum.

Year	Production in Cum	Production in MT	Waste in Cum
First Year (2023-24)	10,000	16,000	2500
Second Year (2024-25)	10,640	17,024	2660
Third Year (2025-26)	11,280	18,048	2820
Fourth Year (2026-27)	11,920	19,072	2980
Fifth Year (2027-28)	12,520	20,032	3130
Total	**53,360**	**90,176**	**14,090**

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16. **Mining method**: Semi-mechanised method of mining is proposed for the project.

17. **Water requirement**: A total of 2 KLD water will be required in the proposed project.

Activity	Calculation	Round off Figure in KLD
Drinking	@10literperhead25×10/1000=0.25 5KLD	0.25
Dust suppression	Total haulage road to be water sprinkled = 275m	1
Plantation	256 plants in a financial year @2L/per plant/per day =256*2/1000=0.512KLD	0.512
	Total	1.762~2KLD

18. **Waste generation**: During the plan period of total of 14090 Cum of waste will be generated. However, about 40% generated waste will be utilized for maintenance and construction of the haul road, approach road. Therefore, a total of 5636 Cum waste will be utilized for maintenance of road sand remaining 8454 Cum of waste will be dumped.

19. **Greenbelt development**: An area of 0.802Ha. within the mine safety zone is proposed to be brought under plantation with 1283nos. of saplings of suitable species like Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, Bambu During the plan period.

Year	No of Saplings	Type of species
1st Year (2023-24)	256	Amla, Neem, Mango, Gamhari, Bahada, Jamun, Bamboo
2nd Year (2024-25)	256	
3rd Year (2025-26)	256	
4th Year (2026-27)	256	
5th Year (2027-28)	256	
Total	1283	

20. **Manpower requirement**: 25 nos of persons will be engaged as manpower for the proposed project.

S. No.	Employee	No. of Persons
1	Mines Manager	01
2	Geologist (Part Time)	01
3	Quarry Supervisor	01
4	Office Clerk	02
5	Workers	18
6	Watchman	02

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Total	25

21. **Project cost**: The approximate cost of the project comes to around Rs 2Cr. Budget for EMP is given in following table.

Sl No	Proposed Action Plan	Expenses per Year (in Rs.)
1	Pollution Control (Dust Suppression)	30,000
2	Environmental Monitoring Air pollution and Water pollution	25,000
3	Green Belt	25,000
5	CSR Activity	25,000
6	Haul Road repair	10,000
	TOTAL	1,15,000

22. **Environment Consultant**: The authorised person on behalf of project proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per **Annexure – C and following additional conditions;**

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

ii) 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 quartz quarry for ensuring that working personnel are not affected by mining.

iii) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities.

iv) No blasting shall be carried out as mentioned in Mining Plan as the habitation area is 135 metres away from the proposed site.

v) The PP shall use all the waste for road maintenance.

vi) Submit connecting road layout.

vii) The topsoil shall be kept in an earmarked area and be used only for plantation purposes.

viii) Plantation shall be completed within first 2 years and maintenance of those shall be done in next 3 years.

ix) Adequate measures shall be taken for controlling dust and noise.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KILIPAL MAHANADI SAND SAIRAT OVER AN AREA OF 13.00 ACRES OR 5.26 HA. HAVING KHATA NO. 298, PLOT NO. 954 IN VILLAGE KILIPAL UNDER TIRTOL TAHASIL OF JAGATSINGHPUR DISTRICT OF SRI SAROJ KUMAR MOHANTY - EC

1. This proposal is for Environmental Clearance of Kilipal Mahanadi Sand Sairat over an area of 13.00 Acres or 5.26 Ha. having Khata No. 298, Plot No. 954 in village Kilipal under Tirtol Tahasil of Jagatsinghpur District of Sri Saroj Kumar Mohanty.

2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.

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3. Quarry lease has been awarded to Sri Saroj Kumar Mohanty, S/o Khetrabasi Mohanty, by Tahasildar of Tirtol for 5 years via letter no. 1989 dated 29/09/2021.
4. The mining plan was approved by Deputy Director Geology, Authorized officer, Directorate of Geology, Bhubaneswar vide letter no.7133/DG and date.02.12.2021.
5. Mining lease is an identified sairat source in the DSR page No.20, Sl.no.18, Annexure I. The proposed mine is an existing Mine.
6. **TOR details**: Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal Letter File. No.-SIA/OR/MIN/71478/2022 vide letter No. 4478/SEIAA on dated 05.05.2022.
7. **Public hearing details:** Public hearing was conducted on 23.11.2022 at front of Devi Brick KILN, Tarajanga, Kilipala, Tehsil- Tirtol, Dist-Jagatsinghpur at 10.30 AM. Issues raised during public hearing are covering of sand loaded vehicle for control of air pollution, protection of river embankment and availability of sand at concessional price.an amount of Rs. 40, 000 has been incurred for action plan of public hearing.
8. **Location and connectivity**: The proposed project is located at Khata no-298, Plot No-954 in village Kilipala, Tahasil Tirtol, district Jagatsinghpur bounded by geo coordinates Latitude: N20°19'05.70" to N20°19'19.20" and Longitude: E86°18'36.10" to E86°18'47.10" bearing Toposheet No. 73L/7. The Nearest NH is NH-53 at a distance 19km and nearest airport is Biju Pat`tanaik international Airport, Bhubaneswar is at about 53 km.
9. **Total Reserves and proposed production**:

As per Approved Mining Plan	
Geological Reserve	**Mineable Reserve**
26462	21935

Mining Lease	Year	Surface Area in m^2	Thickness in m	Production (m^3)
	A	B	C	D=B*C
Kilipal Mahanadi Sand Sairat	1st Year	15150	1	15150
	2nd Year	15150	1	15150
	3rd Year	15150	1	15150
	4th Year	15150	1	15150
	5th Year	15150	1	15150
Total				75750cum

10. **Replenishment study details:** Replenishment Study Report has prepared by Drone method with Pre-monsoon Survey on 23.06.2023 and Post Monsoon Survey on 28.11.2023 and 47106.9389 cum of sand has been replenished annually.Available Sand inside the Lease Area is 78511 cum.However, the total volume of sand available in Kilipal Mahanadi Sand Sairat after Replenishment study is around 78511.5649 m^3 after leaving the safety zone area which can be treated as safe extractable within the framework of the study after arrival of river level and common safe workable area 52331.485 m^2.
11. **Mining method**: Open cast manual mining will be adopted with production capacity of maximum 15150 m^3/year.

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12. **Water requirement**: Total water required for the proposed project is 5 KLD.

S. No.	Particulars	Quantity (KLD)	Source
1.	Dust Suppression (on haul roads etc.)	1.0	Water will be sourced from nearest available source.
2.	Green Belt Development/ Plantation	2.0	
3.	Drinking/Domestic & Sanitation	2.0	
Total		5.0	

13. **Baseline study details**: Baseline study of the study area was conducted during pre-monsoon from 1st March 2022 to 31st May 2022 for Kilipala Mahanadi Sand Quarry.

- **Air :** PM10 levels were ranging from 52.3 to 94.10 µg/m^3.; PM2.5 levels were ranging from 20.40 to 44.20 µg/m^3; SO2 levels were ranging from 4.10 to 20.60 µg/m^3; NOx levels were found ranging from 9.30 to 41.20 µg/m^3.
- **Noise:**The noise levels varied in the study area during day time from 46.7 dB (A) Leq at Khunta Ivillage to 55.3 Leq dB (A) at T-Point where Vehicle Movement is Higher which is increase the noise level. The night time noise level in the study area is in the range of 35.2 (A) Leq at Hajipur Village to 49.6 Leq dB (A) at T-Point because, because Due to surrounding activities of Project site.
- **Ground water monitoring results:** pH ranges from 7.18 to 7.81. TDS in samples ranges from 127 mg/l to 212 mg/l. Total Hardness in the water ranges from 85 mg/l to 142 mg/l. Calcium content in the water ranges from 15.4 mg/l to 25.6 mg/l, Magnesium content in the water ranges from 6.91 mg/l to 11.5 mg/l. Total alkalinity in the water samples ranges from 48 mg/l to 80 mg/l. Chlorides range from 76.4 mg/l to 257.3 mg/l.
- **Surface water monitoring results:** All samples were colourless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 7.11 – 7.69). TDS in samples ranges from 214 mg/l to 406 mg/l. Total hardness in the water ranges from 143 mg/l to 272 mg/l. Calcium content in the water ranges from 25.9 mg/l to 49.1 mg/l, Magnesium content in the water ranges from 11.6 mg/l to 22.0 mg/l, Total alkalinity in the water samples ranges from 54.5 mg/l to 97.1 mg/l. Chloride ranges from 26.3 mg/l to 51.3 mg/l.
- **Soil monitoring results:** All the samples showed pH in the range from 7.25 – 7.69. Conductivity of the samples were in the range from 0.19 µmhos/cm –0.68 µmhos/cm. Moisture were in the range from 5.6% to 13.4%. Organic Carbon ranges from 0.26% - 0.62%. Organic Matter ranges from 0.45% - 1.07%. Phosphorus in the samples ranges from 27.46mg/kg- 53.15 mg/kg. Total Nitrogen ranges from 116 mg/kg- 143 mg/kg. Potassium in the samples ranges from 143 mg/kg - 341 mg/kg. Calcium in the samples ranges from 98 mg/kg - 207 mg/kg. Magnesium ranges from 27 mg/kg – 73 mg/kg. Chloride ranges from 97 mg/kg- 286 mg/kg.

14. **Greenbelt development**:50 trees per year will be planted as greenbelt development.

Environmental Scientist, SEAC

Year	Number of saplings purposed	Location	Type of saplings
1st Year	50	Plantation is carried out safety zone of the lease area (river bank areas)	Teak, Mango, Jammu, Jhaun, Neem etc.
2nd Year	50		
3rd Year	50		
4th Year	50		
5th Year	50		
Total	250		

15. **Manpower requirement**:26 persons will be engaged as manpower for the proposed project.

Designation	No. of Manpower
Supervisory Personnel/ Statutory Personnel	2
Skilled laborers (Operator and Helper)	2
Unskilled Laborer	22
Total	26

16. **Project cost**: Estimated cost of the project is Rs. 20 Lakhs. EMP cost incurs capital cost of Rs. 1, 45,000, and recurring cost of Rs.75,000.

S.no	Particulars	Capital Cost	Annual Recurring cost
1	Pollution Control	55,000	20,000
2	Pollution Monitoring	25,000	10,000
3	Afforestation along Approach road	35,000	25,000
4	Occupational health and safety	30,000	20,000
5	Reclamation /Rehabilitation of mined out area	-	-
Total		1,45,000	75,000

17. **Environment Consultant**: The Environment consultant **M/s Green Circle Inc, Vadodara**along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Green Circle Inc, Vadodara** 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 – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B**.

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) Issues raised in Public Hearing shall be complied by the project proponent.

d) 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

JNayak
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be submitted.

e) Provision of Bio-toilet shall be made at the site.

f) 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.

g) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

h) No natural water course shall be obstructed or diverted for the purpose of sand mining.

i) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR GADA GOVINDAPUR DECORATIVE STONE MINE OVER AN AREA OF 30.05 ACRES OR 12.161 HA IN VILLAGE GADA GOVINDAPUR OF DIGAPAHANDI TAHASIL IN GANJAM DISTRICT OF SRI SATYAJIT DAS - EC

1. This proposal is for Environmental Clearance of Gada Govindapur Decorative Stone mine over an area of 30.05 Acres or 12.161 Ha in village Gada Govindapur of Digapahandi Tahasil in Ganjam District of Sri Satyajit Das.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The applied Mining lease area over 12.161 Hectares was granted by Department of Steel & Mines, Govt. of Odisha vide Letter No. 5767/(IV (DS) SM-35/2010)/ Bhubaneswar, on dated 27.06.2015 M/s Excellent Granites, Vrundavan Apartment, Kirlampudi layout, Vishakhapatnam, Andhra Pradesh for 30 years.
4. Applicant Name is Sri Satyajit Das (Power of Attorney Holder) of M/s Excellent Granites, D. NO- 7-17-17/1, Flat No-302, Vrundavan Apartment, Kirlampudi layout, Vishakhapatnam-530023, Andhra Pradesh.
5. The Mining Plan along was approved by The Directorate of Mines, Odisha, Bhubaneswar vide letter no.MXXII-(a)-10/2016/7687 on dated 21.08.2017 for a period of five years.
6. In the approved DSR, the said project is reflected in the page no. 37 or Sl. No. 8. And there is no other mine located in the 500meters radius of the said mining project.
7. **TOR details**: Terms of Reference issued by SEIAA, Odisha Vide File No: SIA/OR/MIN/402549/2022 dated 17th January 2023; 4223/SEIAA.
8. **Public hearing details:** The Public Hearing meeting held on 03.11.2023 at 11.00 am in front of Thakurani temple of Gada Govindapur village over plot nos. 609, 610 & 611, khata no. 61 under Digapahandi tahasil of Ganjam district Odisha. Issues raised during public hearing are local development, local employment, development of School, Protection of temple, Protection to natural environment and green belt development, the lessee undertake mining by diamond wire saw cutting and not by blasting, issues of blasting such as cracks in houses and temples, protection of domestic animals, Maintenance and repairing of existing roads. Total amount incurred for action plan of public hearing is 17 lakhs.

Jnayak
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9. **Location and connectivity**: The proposed project is for mining of decorative stone located in Village Gada Govindapur under Tahasil Digapahandi, District Ganjam, Odisha, over an area of 12.161 Ha. or 30.05 Acre in favour of M/s Excellent Granites, Vrundavan Apartment, Kirlampudi layout, Vishakhapatnam-530023, Andhra Pradesh. The mining lease area is in the Survey of India Toposheet no. E45A12, with the co-ordinates of Latitude 19°13'17.1" N to 19°13'32.4" N & Longitude 84°32'01.4" E to 84°32'14.8"E. The land use pattern of the mining lease area comes under the non forest waste land (Abada Ajogya Anabadi), bearing Khata no.1011, Plot no. 559, 560, 561, 562, 563 & 564. Kissam: Parbata. The total area granted for mining lease is coming within the non forest waste land. Nearest railway stations is Berhmpur Railway Station located at a distance of 28.60 Km. The lease area can be approached from NH 16 & SH 29 at a distance of 19.40Km & 2.20 Km. Bahuda River at a distance of 1.06 Km. Nearest Airport is Biju patnaik International Airport which is situated at a distance of 176 Km. Lakhari Valley Wildlife Sanctuary is situated 12km distance from the lease area.

10. **Total Reserves and proposed production**: As estimated, the total geological resource is 49,02,810 Cum and Mineable Reserve is 37,19,650 Cum. Volume of maximum Decorative Stone to be produced is11,550 (c.u.m)/annum. Maximum excavation of rocks is 21,000Cu.m/ Annum.

Year	Total volume of Rock Mass (m^3)	volume of Blocks (m^3)	Volume of Rock as Khanda (m^3)	Total quantity of Decorative Stone (m^3)	Volume of Presently Non Saleable (m^3)	Volume of Waste (m^3)
1st Year	15240.00	6096.00	2286.00	8382.00	3048.00	3810.00
2ndYear	17275.00	6910.00	2591.00	9501.00	3455.00	4319.00
3rd Year	20450.00	8180.00	3067.00	11247.00	4090.00	5112.00
4th Year	20300.00	8120.00	3045.00	11165.00	4060.00	5075.00
5th Year	21000.00	8400.00	3150.00	11550.00	4200.00	5250.00
Total	**94265.00**	**37706.00**	**14139.00**	**51845.00**	**18853.00**	**23567.00**

11. **Mining method**: The mine will be worked by semi mechanized means by deploying standards mining equipment suitable for decorative stone mine working. Volume of maximum Decorative Stone to be produced 11,550 (c.u.m)/annum and Maximum excavation of rocks 21,000 Cu.m/ Annum.The ultimate depth of the quarry will be 50 mRL. The equipment utilized for transportation of material, water sprinkling and stone cutter. Equipment like Hydraulic Excavator, Compressor, Jack hammer, LD 4 Machine, Drill Rods and Hammers, Truck and Tipper, Chiesel and Hammers, DG Set, Water tanker, Jeep, Ambulance and Safety equipment.

12. **Waste generation:** During the course of mining plan period, the total rock mass of 23567 m^3 of waste will be generated. During the conceptual plan period 8,83,822 m^3waste will be generated. However about 70% of the generated waste will be utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Therefore, a total of 16497 m^3 of waste will be utilized

Jnayak
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for construction and maintenance of roads and remaining 7070 m^3 of waste will be stacked within 5 benches over 0.900 Ha. area with an average height of 10 m.

13. **Water requirement**: Total water requirement for the project will be 7.5 KLD out of which 3.5KLD will be required for drinking and domestic purpose and 2.0 KLD for plantation and 2.0 KLD for dust suppression purpose.
14. **Power requirement:** Solar lights will be employed for day to day living purposes. Diesel requirement will be 500 litres/month.
15. **Baseline study details**: Baseline Study conducted in the period December 2022 to February 2023.

PERIOD	DEC 2022 TO FEB 2023	Applicable Standards
AAQ PARAMETERS AT 7LOCATIONS	$PM_{2.5}$–18.0 to 40.1 µg/cu.m	60 µg/cu.m
	PM_{10} – 33.6 to 71.1 µg/cu.m	100 µg/cu.m
	SO_2 – 4.2 to 10.4 µg/cu.m	80 µg/cu.m
	Nox – 10.3 to 22.3 µg/cu.m	80 µg/cu.m
Ground water Quality at 4 Locations	pH – 7.1 to 7.7	6.5 to 8.5
	Total Hardness – 172 to 188 mg/l	600 mg/l
	Chloride - 26 to 120 mg/l	250 mg/l
	Fluorides – <0.05 to 0.31 mg/l	1.5 mg/l
	TDS – 250 to 450 mg/l	1000 mg/l
	Heavy metals : BDL (Cd <0.001, As <0.01, Hg<0.0001) mg/l Detection limits of analysis method	Heavy metals: (Cd <0.003, As <0.01, Hg<0.001) mg/l
Surface water at 5 locations	pH – 7.05 to 7.85	
	Dissolved Oxygen – 5.8 to 7.2 mg/l	
	Biochemical Oxygen Demand – 1.5 to 2.8 mg/l	
	Chemical Oxygen demand – 7 to 20 mg/l	
Noise at 7 locations	Day (dBA Leq) 40.2 to 45.4	55
	Night (dBA Leq) 30.5to 35.6	45
Soil Quality at 4 locations	pH –5.4 to 7.7, Potassium –167 to 539 Kg/Ha., Available Phosphorous –6.4 to 29.9 kg/Ha, Total Organic Carbon % – 1.08 to 2.15, Electrical Conductivity- 138 to 206 (µs/Cm)	

16. **Greenbelt development**: An amount of Rs.4,00,000 has been allocated for development of greenbelt as capital cost and annual expenses for green belt maintenance will be Rs. 1,00,000.00 as recurring cost.

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Year	Area to be planted (m^2)	No. of Saplings	Type of species to be Planted	Location
1st Year	10160	2600	Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo	Along the Safety Zone
Conceptual period	70000	8000	Jamun, Chakunda, Bamboo, Agave	Reclaimed quarry area
	9000	1400	Jamun, Chakunda, Bamboo, Agave	Reclaimed dump area
3rd Year Plan Period	1000	200	Jamun, Chakunda, Krushnachuda	Road Side plantation

17. **Manpower requirement**: A total of 100 nos. of employed in the mine including management and supervisory personnels.
18. **Project cost**: Total project cost of the mining is 80 Lakhs. The updated capital cost and recurring cost (per annum) for the environmental facilities for the project works out to 12.50 Lakhs and 6Lakh / year respectively.
19. **Environment Consultant**: The Environment consultant **M/s Kalyani Laboratories Private Limited, Bhubaneswar**along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Kalyani Laboratories Private Limited, Bhubaneswar,** along with the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per **Annexure – D and following additional conditions;**

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

ii) 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 decorative stone quarry for ensuring that working personnel are not affected by silicosis.

iii) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities.

iv) The site has no approach road from the mine site till the revenue road Thus, required permission for approach road need to acquire and due procedure to construct the road be followed before commencement of mining.

v) Measures shall be taken to maintain the slopes in stable condition.

vi) Provisions shall be made to store the surface runoff within the mining lease. Garland drains and settling ponds of adequate capacity shall be constructed. No water shall be discharged outside the mining lease without proper treatment.

vii) Adequate measures to be followed for dust suppression, noise control and solid waste management during the mining activities.

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ITEM NO. 09

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PAIKADAKULGUDA SEMI PRECIOUS STONE CAT'S EYE MINES OVER AN AREA OF 38.316 HA OR 94.68 ACRES IN VILLAGE- PAIKADAKULGUDA, KANDHADAKULGUDA AND BADOLIMA, TAHASIL/PS-BISSAM CUTTACK DISTRICT- RAYAGADA OF SRI BAJARANG LAL GUPTA - EC

1. This proposal is for Environmental Clearance of Paikadakulguda Semi Precious Stone Cat's Eye Mines over an area of 38.316 Ha or 94.68 acres in village- Paikadakulguda, Kandhadakulguda and Badolima, Tahasil/PS-Bissam Cuttack District- Rayagada of Sri Bajarang Lal Gupta.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. Mining lease over an area of 41.485 hectares has been granted for a period of fifty (50) years vide letter No.**254/SM**, Bhubaneswar dated 07.01.2017. However, extent of the M.L area over 41.485 hectares has been reduced finally to 38.316 hectares as per the letter dated 05.05.2021.
4. The Mining Plan along with PMCP was approved by Directorate of Mines & Geology, Steel & Mines Department, Govt. of Odisha, Bhubaneswar vide letter no. MPM/A/07-ORI/BHU/2021-22 dated 04.08.2021.
5. **As it is a major mineral (Cat's eye), DSR has not been prepared.**
6. **TOR details**: Terms of Reference (TOR) is issued by SEIAA, Odisha Vide letter no: 4223/SEIAA dated 15.03.2022.
7. **Public hearing details:** The Public Hearing meeting held on 20.07.2023 at 11.00 a.m. in Paikadakulguda village under Bissam Cuttack Tahasil of Rayagada District, Odisha. Issues raised during public hearing are regarding provision of health facilities, peripheral development of the village including road development, drinking water facility & other developmental work. A cost of Rs. 18.40 Lakhs has been allocated for implementation of activities proposed during public hearing.
8. **Location and connectivity**: The project site of Paikadakulguda Semi Precious Stone Cat's Eye Mines is located in village, Paikadakulguda, Kandhadakulguda and Badolima, District-Rayagada. The project site is located in Toposheet. No 65 M/10 and latitudes varies from 19°34'07.80" N to 19°34'38.71" N and longitudes varies from 83°31'59.41" E to 83°32'29.07" E as per geodetic survey.Out of total area 28.899 Ha. of land is waste land (Pahad, Dangar, Patharbani & Patita), 0.202Ha. of land is under Agricultural Field (Dhana-II) and rest 9.215 comes under Dhoda & Basti Jogya land. Mining area is accessible from Muniguda, covering a distance of 5 km. It lies on the Bhawanipatna- Bissam Cuttack road. Bhawanipatna is the nearest head quarter and Bissam Cuttack nearer Tahasil situated at a distance 54 km and 8 km respectively south of Muniguda. The Nearest railway station is at Muniguda on the Raipur-Vizianagaram South East Railway. Kotagarh Elephant Reserve is situated 25km distance from the lease area.
9. **Total Reserves and proposed production**: As estimated, Mineable Reserve is 304 Kg; Indicated Resources is 211 Kg; Inferred Resources is 93Kg and total production is 40Kg per Annum.

Jnayak
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10. **Mining method**: Opencast semi-mechanized method of mining will be adopted in the M.L area on single shift basis with deployment of machines like 100mm dia DTH drill, 0.9m^3 capacity excavator, 10T capacity tippers etc. Overburden will be excavated & loaded by the excavator and transported through 10 t capacity truck / tippers to the dumping site. Cat's Eye bearing pegmatite will be transported to the Cat's Eye sorting & picking yard where rock mass will be broken, if necessary and a part of Cat's Eye will be picked up & sorted manually. Remaining Cat's Eye stones from the excavated materials will be picked up / hand sorted after washing. Existing pit will be laterally developed up to a depth of 3m from surface level to produce Cat's Eye @28 kg / annum to 40 kg / annum.

11. **Waste generation and management:** As the gemstone content is only 0.001% the entire excavated material there will be generation of large quantity of waste. In the washing unit the gemstone are separated and the waste material goes to the settling tank. The settled mineral rejects in the form of sludge dried in a drying yard and then dumped. The Cat's Eye to waste ratio will be 1: 200 (Kg/Cu.m). During the conceptual period there will be generation of 138600 cu.m and will be stored over an area of 1.231 Ha of area. The waste will be transported from the quarry area to the dumping site through tippers.

Year	OB Generation (m^3)	OB to be Dumped (m^3)	Dump Name	Location of Dump (Coordinates)	Existing or New Dump	Top RL of the Dump	No. of terrace proposed	Individual Terrace Height (m)	Slope of the terrace / dump
I	5600	5600	Dump	213S– 265S / 286W – 351W	New	313	1	7.5	37^0 30'
II	6400	6400	do-	213S – 269S / 265W – 286W	-do-	313	1	7.5	37^0 30'
III	7000	7000	-do-	212S – 276S / 243W – 265W	-do-	313	1	7.5	37^0 30'
IV	7600	7600	-do-	216S – 286S / 220W – 243W	-do-	313	1	7.5	37^0 30'
V	8000	8000	-do-	222S – 292S / 196W – 220W	-do-	313	1	7.5	37^0 30'
Total	34,600	34,600	---	---	---	---	---	---	---

12. **Water requirement**: The water requirement of the washing plant is 6 m^3 / day which will be sourced by tanker. Water used for washing of the gemstone will be recirculated in the process.

13. **Baseline study details**: Baseline Study was conducted in the period March to May 2022.

- **Ambient Air Quality:** Concentration of PM10 varies from 38.1 to 62.2 µg/m^3 and $PM_{2.5}$ varies from 19.2 to 34.2 µg / m^3. The conc. of SO_2 varies from 4.1 to 10.3 µg / m^3 and NOx conc. varies from 10.1 to 19.6 µg / m^3.

- **Surface water Quality:** The pH range from 7.1 to 7.9.Total Dissolved Solids ranges from 110-154 mg/l. BOD ranges from 1.2 to 2.5 mg/l.COD ranges from 6 -20 mg/l. DO range is from 5.9 to 6.7 mg/l. Hardness of the water sample ranges from 56-92 mg/l. Iron ranges from 0.09-0.17 mg/l and it is within permissible limits. Fluoride is <0.005 and chloride range is from 10-22 mg/l i.e 10 mg/l.Heavy metals like Cu, Pb, Ag, Hg, B etc has been analyzed and found to be below the detection limit in all the water samples collected for testing.

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- **Ground water Quality:** Water is colourless and odourless and found to be suitable for human consumption. The pH level of the ground water sample ranges from 7.0 to 7.7. Total hardness ranges from 64 to 108 mg/l, and total dissolved solid ranges from 84 to 136 mg/l. Fluoride is <0.05 mg/l and chloride is 8-20 mg/l. Fluoride content of the ground water sample is within the prescribed limit. Alkalinity ranges from 28 to 56 mg/l. Heavy metals like, Pb, Cr, Hg, Cd & As are not detected in the ground water sample this indicates that the water is free from any heavy metal contamination.
- **Soil Quality:** Soil of the area is mostly sandy loam and reddish brown in colour. pH of the soil samples are almost in neutral ranges i.e. varies from 6.3 to 7.0 i.e. slightly acidic to neutral. Available organic Nitrogen varies from 231 to 264 kg/Ha which is in considered as low nitrogen content. Available Phosphorus content in soil samples 16 to 23 kg/Ha medium content of phosphorous in the soil samples of the area. The soil samples indicate that the availability of Potassium ranges from 148 -309 kg/Ha which medium in potassium content. Organic carbon ranges from 1.2 to 1.6 % which is sufficient in the soil samples.
- **Noise Quality:** Noise level ranges from 40.4 to 53.4 dB during day time and 32.6 to 43.9 dB during the night time.

14. **Greenbelt development**: The green belt is proposed to be developed in a width of 7.5 m in safety zone along the boundary of mine lease area covering 2.190 ha with 5475 saplings. During the conceptual period dump area of 1.221 Ha will be reclaimed with plantation of 3050 saplings and 1.616 Ha of with 4040 saplings. An amount of Rs.4,50,000 has been allocated for development of greenbelt and annual expenses for green belt maintenance will be Rs. 2,00,000.00.

Year	Location	Area Proposed (Ha.)	Spacing (m)	No. of Sapliings required	Name of Saplings
1st	Safety zone along M.L boundary	1.0	2.0	2500	Mango, Neem, Mahaneem, Chakunda, Accacia, Eucalyptus etc. as per soil condition
2nd		1.19	2.0	2975	-do-
Total	---	2.19	---	5475	---
Conceptual period	Dump	1.221	2.0	3050	Mango, Neem, Mahaneem, Chakunda, Accacia, Eucalyptus etc. as per soil condition
	Reclaimed Quarry	**1.616**	**2.0**	**4040**	

15. **Manpower requirement**: A total of 74 nos. of will be employed in the proposed mine.
16. **Project cost**: Total project cost of the mining is 320 Lakhs, EMP Capital cost includes 22.50 Lakh and recurring cost is 12.5 lakh mine.
17. **Environment Consultant**: The Environment consultant **M/s Kalyani Laboratories Private Limited, Bhubaneswar**along with the proponent made a presentation on the proposal before the Committee.

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Considering the information furnished and the presentation made by the consultant, **M/s Kalyani Laboratories Private Limited, Bhubaneswar**along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent:

i. Mineralogical composition analysis of waste.

ii. Brief geology of the lease area.

iii. Measures to control the stability of slopes

iv. Terrain maps along with the layout of the garland drain and settling ponds of adequate capacity for treatment of surface run-off.

v. Measures to be followed for control of dust and noise, and solid waste management during the mining activities.

vi. Few lands are agricultural lands. Therefore, kisam of land needs to be converted into appropriate Kisam before start of mining

vii. Surface right shall be applied and submitted.

viii. Note on post mining and post recovery plan of the excavated soil after the extraction of minerals duly approved by the concerned mining officer.

ix. Submit progressive mine closure plan.

ITEM NO. 10

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR MAJHIGUDA DECORATIVE STONE QUARRY OF M/S SRI BHUBANESWARI GRANITES AND M/S KPK GRANITES IS SPREAD OVER AN AREA OF 24.538 HECTARES (HA) FALLS IN VILLAGE MAJHIGUDA NO. 57 UNDER KHAIRAPUT TEHSIL OF DISTRICT MALKANGIRI OF SRI K. SRINIVASA RAO - EC

1. This proposal is for Environmental Clearance of Majhiguda Decorative Stone Quarry of M/s Sri Bhubaneswari Granites and M/s KPK Granites is spread over an area of 24.538 Hectare (ha) falls in village Majhiguda No. 57 under Khairaput Tehsil of District Malkangiri of Sri K. Srinivasa Rao.

2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.

3. The Letter of Intent vide letter no. 192/SM & 196/SM, Bhubaneswar, for grant of mining lease for a period of 30 years in favour of M/s Bhubaneswari Granites & M/s KPK Granites respectively was issued on dated 07-01-2022.

4. Majhiguda Decorative Stone Quarry over an area of 10.522 hectare and 14.016Ha. in village Majhiguda No-57 under Khairaput Tahasil in Malkangiri district is a fresh mining lease granted and executed for PL on 15.11.2018 in favour of M/s Sri Bhubaneswari Granites & M/s KPK Granites respectively. Mining Lease was granted by Department of Steel & Mines, Govt. Of Odisha vide letter No. 192/SM/Bhubaneswar, dated 07.01.2024.

5. The mining plan of Majhiguda Decorative stone mine over 10.522Ha. (M/s Sri Bhubaneswari Granites) was approved by Director of Mines with letter no. MXXII-(b)10/2022 8006/DM, dated 17.09.2022 and 14.016Ha. (M/s KPK Granites) was approved by Director of Mines with letter no. MXXII-(b)9/2022 8010/DM, dated 17.09.2022.

JNayak
Environmental Scientist, SEAC

6. Mining lease is in the DSR page no.-06, sl.no.- 8 and 9.It is a new mine and no cluster is present within 500m of proposed quarry.

7. **TOR details**: Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal. No.- SIA/OR/MIN/403075/2022, dated 27.01.2023.

8. **Public consultation details**: The Public consultation was conducted successfully on 23.08.2023 at 11.00AM in Majhiguda village. Issued raised during public hearing are employment of local youth and villagers on priority, protection of agricultural land due to mining and surface run-off, repair of road connected to nearby tourist spot and contribution for temple renovation, Education & Sports, drinking water and ambulance facility, skill development for women. Annual expenses incurred for the action plan of public hearing is Rs 10 lakhs /annum.

9. The lease area is not included in DLC of Malkangiri district.

10. **Location and connectivity**: The lease is located near village Majhiguda No. 57, Tahasil Khairaput of Malkangiri district of Odisha and is depicted in Survey of India topo sheet no 65/7 on 1: 50,000 scale. The lease area has the following coordinates Sri Bhubaneswari Granites-Latitude: $18^0$28'28.5" to $18^0$28'36.5" North and Longitude: $82^0$15'00.9" to $82^0$15'23.32" East; KPK Granites- Latitude: $18^0$28'18.7" to $18^0$28'28.5" North to Longitude: $82^0$15'00.6" to $82^0$15'22.7" East. The Cluster mine area of the both the lessee is located at a distance of 3km from Khairaput and is well connected by an all weather road through the village Jhariagurha at a distance of 600m away from the area. SH - 47 from Govindapali – Balimela – Chitrakonda passed through Khairput; whereas Govindapali (13km from Khairput) is on NH– 326, connecting Malkangiri &Jeypore. The dist. headquarter Malkangiri is 60km away and the nearest place of importance is Jeypore which lies at a distance of 65 km from the area. Nearest rail-head is also Jeypore on Koraput – Jagdalpur line of East Coast Railway.

11. **Total Reserves and proposed production**: As estimated, the total geological reserveis 2542800 m^3 and mineable reserves: 1950482 m^3.

12. **Mining method**: On account of exposed sheet type occurrence of Dolerite as decorative stone, mining is proposed to be essentially done by open cast semi-mechanized method in single shift. The major activities in this cluster of quarries are removal of waste materials, block cutting & dressing, loading & transportation of blocks and waste disposal. Mining operation will be in a single shift of 8 hours with having a 2 hours lunch break in the afternoon. Semi-mechanized method of mining will be adopted in single shift (8 hours) during the mining operation; which involving drilling, cutting &transportation only by deploying machines like compressor, jack hammer drill, wire saw cutter, hydraulic excavator and tippers. The maximum stone block dimension opted in the face ranges from 3m X 2m X 2m to as small as 0.5m X 0.5m X 0.5m blocks. The height & width of the bench in quarry shall be kept as 6m and 12m respectively. The individual slope of benches will be 70-800 whereas the overall slope of the proposed quarry would be kept at 450.The ultimate depth in mining pit will be 298m AMSL. The Dolerite as decorative stone excavated from the quarry face will be sized & shaped using chisels & hammer as per need on the yard/quarry floor & the rough dressed blocks will be marketed. Manual labour with Pitcher/sledge hammers & chisels of different sizes will be used to have well shaped blocks free from protrusions and irregularities. Hydraulic excavators will be deployed to segregate useful blocks and waste materials. There will be no other processing of the rocks within the lease area. In

Environmental Scientist, SEAC

Majhiguda Decorative Stone Quarry over 10.522 ha., One quarry has been proposed to be developed both laterally and vertically in the central west part of the ML area; whereas in Majhiguda Decorative Stone Quarry over 14.016 ha., five quarries has been proposed to be developed both laterally and vertically in the central west as well as eastern part of the ML area leaving the highest peak along the southern safety zone. Miming operation within the M.L area of 10.522 ha & 14.016 ha will start after the execution & registration of mining lease deed to produce decorative stone. However, year wise development & production of decorative stone during ensuing five years are given below;

13. Excavation Plan of Decorative Stone

Lease	Year of Mining	Volume of Excavation	Marketable Decorative Stone (M3)	Volume of Waste (M3)
M/s Bhubaneswari Granites	1st year	77952	15590	62362
	2nd year	82428	16486	65942
	3rd year	88880	17776	71104
	4th year	93538	18708	74830
	5th year	96540	19308	77232
	Total	**439338**	**87868**	**351470**
M/s KPK Granites	1st year	78810	15760	63040
	2nd year	84850	16970	67880
	3rd year	88745	17749	70996
	4th year	97385	19477	77908
	5th year	104350	20870	83480
	Total	**454140**	**90826**	**363314**

14. The solid waste to be generated is Dolerite floats admixed with soil on the top, off standard blocks etc shall be dumped over an earmarked area temporarily. Usually,the wastes are in the form of big boulders and chances of generating fine dust particles are very less. However, water sprinkling shall be carried out over the area to keep moistened the exposed surfaces to rule out any chances of fugitive dust generation. During the plan period, 714784 Cub M of waste shall be generated. It is planned to utilize 40% of the generated waste for maintenance of haul road and approaching road to the general public transport road and balance 60% of the waste shall be dumped with an overall slope of 800. Backfilling of the quarried area shall be taken up and the waste generated from the mining operation shall be used for backfilling the voids. Priority shall be given to the locals who will be breaking the bigger size blocks and used for various construction purpose after due permission from the Govt. Authorities. The measures will be undertaken to stabilize the dump such as terracing at dead end and as the dump constitutes of rocky mass, no plantation is envisaged on the dump slope, during the plan period, retaining wall and garland drain will be constructed, settling tanks shall be constructed to arrest the wash off waster. Alternatively, the waste materials can be used for road making purposes for which there is high demand in near vicinity. After getting permission from the statutory authority, the balance waste material i.e. estimated 40% of the waste can be utilized in-house and road maintenance purpose and the balance 60% of the waste could be sold to outside party for road construction purpose. In case, the permission shall be granted there shall be no requirement of any space for dumping of waste. The entire waste shall be sold to the outside party. However, for the initial five years, the dump plan has been made.

Tarayak
Environmental Scientist, SEAC

15. **Water requirement**: The daily water requirement of the project is estimated to be 35 KLD on average and 45 KLD during peak summer and it will be drawn from ground water source with due permission.

16. **Power requirement:** The supply of electrical energy for the mining complex shall be received from 225KVA DG set. The mine shall be under operation on single shift basis. Power requirement to be met from the DG set shall be drill, wire saw cutter and general lighting purpose only. A 225 KVA DG set shall be sufficient to meet the power requirement of all these. The DG set shall be mounted on trolley so that it can be moved from one place to another for the purpose.

17. **Baseline study details**: Baseline study was conducted during summer season of 2022 i.e. from March 1st 2022 till May 31st 2022.

- Ambient Air Quality was monitored at eight sampling stations, which were selected taking into account the predominant wind direction, population zone, sensitive receptors like reserved forests etc, and the monitoring were conducted for a period of three months with the frequency of monitoring for 2 days per week at each sampling station. The monitored results show PM10 levels were in the range of 28 $\mu g/m^3$ to 54 $\mu g/m^3$, PM2.5 levels were in the range of 9 $\mu g/m^3$ to 24 $\mu g/m^3$, SO2 levels were in the range of 3 $\mu g/m^3$ to 7 $\mu g/m^3$, NOx levels were in the range of 7 $\mu g/m^3$ to 14 $\mu g/m^3$& CO remained below detection level which are well within the prescribed limit of Central Pollution Control Board.
- Water quality parameters of Five Surface and Five Ground water resources within 10km radius of the study area was studied to assess the water environment and evaluate anticipated impact of the project. The water samples were collected and analyzed for physical, chemical and microbiological characteristics as per CPCB guidelines and approved methods in the NABL and MoEF& CC accredited laboratory. The result of all the surface & ground water samples collected shows that the water quality are within the permissible norms stipulated by CPCB.
- Noise level in the study area was monitored at eight sites. The measurements were carried out continuously for the 24-hour period. Noise levels vary from 30.6 to 53.8 dB(A) during day time and BDL to 35.9 dB(A) during night time. It is, therefore, concluded that the noise levels within the habitation/ residential area are well within the specified standards.
- Soil samples were collected from five locations including one from project site; from 30 cm depth with a stainless-steel scoop. It is found that the soil is slightly acidic to neutral in nature. The bulk density ranges between 1.06 to 1.32 g/cm^3. The soil texture is mostly loamy. The soil is fertile for agriculture purpose.

18. **Greenbelt development**: The greenbelt development will be covered 10% of the project area i.e. about 2.508 Hectares. Around 6,270 numbers of trees of the local species which are resistant to pollutants will be planted. The width of the belt around the proposed mining operations shall be of 7.5m. Plantation will be carried out in open and blank areas in surrounding of mine in consultation with local administration.

Year	Area to be planted(m2)	No. of Saplings	Type of species to be Planted	Location
1st Year	11,080.00	2270	Amla, Neem,	Along the ML

Environmental Scientist, SEAC

Year	Area to be planted(m2)	No. of Saplings	Type of species to be Planted	Location
2nd Year	7,000.00	2000	Mango, Babul, Kasi, Jackfruit, Teak and Bamboo	Boundary
3rd Year	7,000.00	2000		
Total	25,080.00	6270		

19. **Manpower requirement**: In Majhiguda projects of Sri Bhubaneswari Granites 151 No. of person & in the project of KPK Granites 164 nos. of person will be directly engaged.

20. **Project cost**: Estimated Capital cost for the Majhiguda Decorative stone cluster Rs 20 crores; each decorative stone quarry in this cluster cost Rs 10 crores. The capital cost of EMP is calculated to be Rs 48 lakhs & recurring cost is Rs 22 lakhs. Based on demands in Public Hearing & assessment of local situation, a sum of Rs 15 lakhs will be spend under CSR activities in first two years and Rs 10 lakhs shall be spend every year under developmental activities.

Particulars	Details of Capital Investment Cost		Details of Annual Recurring Cost	
	Existing	Proposed	Existing	Proposed
Air Pollution Control	--	Rs 15 lakhs	--	Rs 5 lakhs
Water Pollution Control	--	Rs 9 lakhs	--	Rs 2 lakhs
Noise Pollution Control	--	Rs 1 lakh	--	Rs 2 lakhs
Environment Monitoring and Management	--	Rs 3 lakhs	--	Rs 5 lakhs
Occupational Health	--	Rs 10 lakh	--	Rs 7 lakhs
Green Belt Development and Maintenance	--	Rs 10 lakhs	--	Rs 1 lakhs
Total	**--**	**Rs 48 lakhs**	**--**	**Rs 22 lakhs**

21. **Environment Consultant**: The Environment consultant **M/s Centre for Envotech and Management Consultancy Pvt. Ltd. Bhubaneswar**along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech and Management Consultancy Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended the following information to be submitted by the proponent;

i. Before commencement of mining, the project proponent shall submit details regarding trees enumeration, cutting and transplantation of trees in safety zone in consultation with concerned DFO.

Jnayak
Environmental Scientist, SEAC

ii. Project proponent shall keep the excavated soil, restore and use the same after extracting the mineral.

iii. Submit RL of ground level and RL of post mining.

iv. Measures to control the stability of slopes

v. Detail waste water treatment facilities during cutting/washing of granite slabs and silt management. Layout of the garland drains and settling ponds of adequate capacity for treatment of surface run-off.

vi. Measures to be followed for control of dust and noise, and solid waste management during the mining activities.

vii. Details of connecting road with layout along with the supporting documents.

viii. PP shall obtain the permission from Gram Panchayat for usage of water from nearby villages.

ITEM NO. 11

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR OLAGADA TARTOL MAHANADI SAND SAIRAT OVER AN AREA OF 20.00 ACRES OR 8.09 HA. HAVING KHATA NO. 377,336, PLOT NO. 1270,1123 IN VILLAGE OLAGADA AND TARTOL UNDER TIRTOL TAHASIL OF JAGATSINGHPUR DISTRICT OF SRI SAGAR KUMAR RAY - EC

1. This proposal is for Environmental Clearance of Olagada Tartol Mahanadi Sand Sairat over an area of 20.00 Acres or 8.09 Ha having Khata No. 377,336, Plot No. 1270,1123 in village Olagada and Tartol under Tirtol Tahasil of Jagatsinghpur District of Sri Sagar Kumar.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. Quarry lease has been awarded to Sri. Sagar Kumar Ray S/o-Sri Purna Chandra Behura, by Tahasildar of Tirtol for 5 years via letter no. 2433 dated 02/12/2021.
4. The mining plan was approved by Deputy Director Geology, Authorized officer, Directorate of Geology, Bhubaneswar vide letter no.5469/DG and date.15.09.2021.
5. Mining lease is an identified sairat source in the DSR page No.20, Sl.no.12, Annexure. I and the mine is an existing Mine.
6. **TOR details**: Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposa No.-SIA/OR/MIN/71464/2022 and letter No.4585/SEIAA on dated 19.05.2022.
7. **Public hearing details:** Public hearing was conducted on 25.11.2022 at Bana Gachha Thakur Padia, Tahasil- Tirtol, Dist-Jagatsinghpur at 10.30 AM. Issues raised during public hearing are covering sand loaded vehicle to control air pollution; prevention of sand spillage, availability of sand at concessional price. An amount of Rs. 40,000(CER Budget) has been incurred for action plan of public hearing.
8. **Location and connectivity**: The proposed project is located at Khata no-377,336, Plot No-1270,1123 in Olagada & Tartol village under Tirtol Tahasil of Jagatsinghpur district bounded by Latitude: N20°18'54.13"to 20°19'10.53"N and Longitude : E86°20'31.03" to 86°21'06.28"E bearing Toposheet no 73L/7. The Nearest railway station is Nimakana

Environmental Scientist, SEAC

Railway Station 4km and nearest airport is Biju Pattanaik international Airport, Bhubaneswar is at about 56 km

9. **Total Reserves and proposed production**: As estimated, the proposed production is 23300cum/Year

As per Approved Mining Plan	
Geological Reserve	**Mineable Reserve**
110544	88182

10. **Replenishment study details**: Replenishment Study Report has prepared by Drone method. Pre-monsoon Survey was conducted on 23.06.2023 and Post-Monsoon Survey was conducted on 28.11.2023 along 7651.82001 cum of sand has been replenished annually. Deposit of sand thickness is 0.4m.

11. **Mining method**: Open cast manual mining method will be adopted for the proposed project with a production capacity of max 23300 m3/year.

12. **Water requirement**:25 KLD is the total water required for the proposed project.

S. No.	Particulars	Quantity (KLD)	Source
	Dust Suppression (on haul roads etc)	5.0	Water will be sourced from nearest available source.
	Green Belt Development/Plantation	5.0	
	Drinking/Domestic & Sanitation	15.0	
Total		25.0	

13. **Baseline study details**: Baseline study of the study area was conducted during pre-monsoon from 1st March 2022 to31st May 2022 for Olagada Mahanadi Sand Quarry.

- **Air Quality:** PM_{10} levels were ranging from 61.2 to 86.5 µg/m3.$PM_{2.5}$ levels were ranging from 18.6 to 27.7 µg/m3.SO_2 levels were ranging from 6.9 to 10.3µg/m3. NO_x levels were found ranging from 10.4 to 15.4 µg/m3.
- **NoiseQuality:** The noise levels varied in the study area during day time from 51.2 dB (A) Leq at Nagapura to 63.5 Leq dB(A) at T-Point where Vehicle Movement is Higher which is increase the noise level. The night time noise level in the study area is in the range of 32.8 (A) Leq at Nagapura Village to 42.9 Leq dB(A) at T-Point because, because Due to surrounding activities of Project site.
- **Ground water monitoring results:** pH ranges from 6.72 to 7.28. TDS in samples ranges from 101 mg/l to 484 mg/l. Total Hardness in the water ranges from 159 mg/l to 269 mg/l. Calcium content in the water ranges from 21.47 mg/l to 40.28 mg/l, Magnesium content in the water ranges from 1.92 mg/l to 6.89 mg/l. Alkalinity in the water samples ranges from 110 mg/l to 231 mg/l. Chlorides range from 9.14 mg/l to 28.93 mg/l.
- **Surface water monitoring results:** All samples were colourless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 6.98 –

Environmental Scientist, SEAC

7.86). TDS in samples ranges from 29 mg/l to 98 mg/l. Total hardness in the water ranges from 16 mg/l to 57 mg/l. Calcium content in the water ranges from 3.28 mg/l to 16.38 mg/l, Magnesium content in the water ranges from 1.4 mg/l to 3.97 mg/l, Alkalinity in the water samples ranges from 104 mg/l to 148 mg/l. Chloride ranges from 7.23 mg/l to 9.64 mg/l.

- **Soil monitoring results:** All the samples showed pH in the range from 6.92-7.25. Conductivity of the samples were in the range from 111.2µmhos/cm – 264.1µmhos/cm. Moisture were in the range from 3.43% to 10.55%. Organic Carbon ranges from 0.54% - 1.64%. Organic Matter BDL. Phosphorus in the samples ranges from 0.14 mg/kg-0.62 mg/kg. Total Nitrogen BDL. Potassium in the samples ranges from 150 mg/kg - 299 mg/kg. Calcium in the samples ranges from 48.32 mg/kg - 84.31 mg/kg. Magnesium ranges from 12.45 mg/kg – 53.32 mg/kg. Chloride ranges from 48.32 mg/kg- 84.31 mg/kg.

14. **Greenbelt development:**50 trees per year will be planted as greenbelt development for the proposed project.

Year	Number of saplings proposed	Location	Type of saplings
1st Year	50	Plantation is carried out safety zone of the lease area(river bank areas)	Teak,Mango,Jammu,Jhaun, Neem etc.
2nd Year	50		
3rd Year	50		
4th Year	50		
5th Year	50		
Total	250		

15. **Manpower requirement**: For the proposed project,49 persons are required as manpower.

Designation	Number of persons (Olagada Sand Quarry)
Supervisory Personnel/ Statutory Personnel	1
Skilled laborers (Operator and Helper)	8
Semi-skilled Laborer	10
Unskilled Laborer	30
Total	**49**

16. **Project cost**: The estimated project cost is Rs. 10 lakhs, with EMP Capital Cost of Rs. 1, 45,000 and recurring cost of 75,000.

Jnayak
Environmental Scientist, SEAC

17. **Environment Consultant**: The Environment consultant **M/s Green Circle Inc., Gujurat** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Green Circle Inc, Vadodara** 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 – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B**.

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) Issues raised in Public Hearing shall be complied by the project proponent.

d) 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.

e) Provision of Bio-toilet shall be made at the site.

f) 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.

g) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

h) No natural water course shall be obstructed or diverted for the purpose of sand mining.

i) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

ITEM NO. 12

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KADAMBIRIGUDA SAND QUARRY BEARING KHATA NO.- 10, PLOT NO.- 71, OVER AN EXTENT OF 5.888 HA./14.550 ACRES NEAR VILLAGE- KADAMBIRIGUDA, TEHSIL- RAYAGADA, DISTRICT- RAYAGADA OF SRI MANOJ KUMAR SAHU - EC

1. This proposal is for Environmental Clearance of Kadambiriguda Sand Quarry bearing Khata No.- 10, Plot No.- 71, over an extent of 5.888 ha./14.550 acre near village- Kadambiriguda, Tehsil- Rayagada, District- Rayagada of Sri Manoj Kumar Sahu .
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The Mining Plan of Kadambiriguda Sand Quarry Project has been approved by Deputy Director of Geology, Office of Joint Director Geology Zonal Survey, Koraput, Odisha vide Memo Number 355 / Mines Dated 25.03.2022.
4. The proposed project is a new mine and mining lease is an identified sairat source in the DSR Report Page no. 3, S. No. 9.
5. **TOR details**: The Terms of Reference (TOR) letter was issued by SEIAA, Odisha vide letter No.5083/SEIAA, Dated 02.08.2022.

Environmental Scientist, SEAC

6. **Public hearing details:** Public Hearing was conducted on 09th June 2023 at 11.00 A.M in Kotapeta Village, Kotapeta Gram Panchayat, Maligam RI circle under RayagadaTahasil of Rayagada District. Issues raised during public hearing are sand mining from the river bed, transportation of sand, dust suppression measure, protection of Environment, peripheral development of the village and plantation.

7. **Location and connectivity**: The mine lease area is located in Village – Kadambiriguda, Tahasil – Rayagada, District –Rayagada on Khata No. 10, Plot No. 71 of Nagavali or Langulya river covered in the Survey of India Topo Sheet No – 65M/8 and is bounded between the Latitude - 19°12'53.83" N to 19°13'12.25" N and Longitude – 83°25'18.80" E to 83°25'24.49" E. Kisam of land is Nadi. The Nearest National Highway is at NH- 326 at a distance of 0.20 KM in W. The Nearest Airport is Biju Patnaik International Airport, at 275.0 Km in NE.Nearest river is Nagavali or Langulya River on which the sand project is going to be done. Nearest reserve forest is at KomatalapetaReserve Forest at a distance of 1.80 Km in East. Nearest road bridge is near K.Maligaon road bridge over Nagavali river at a distance of 1.50 Km in SE. Nearest river embankment is near K. Maligaon Road bridge over Nagavali river at a distance of 1.50 Km from lease area in SE. Nearest Electric Transmission line pole is 0.30 Km in NW.

8. **Total Reserves and proposed production**: As estimated, Mineable Reserves is 35,800 cum and proposed production is 8,001 cum/year.

Year	Production of Sand in cum/annum
1st	8,001
2nd	8,001
3rd	8,001
4th	8,001
5th	8,001
Total	**40,005**

9. **Replenishment study details:** The study was carried out in month of June 2023 & Dec 2023 for pre & post monsoon respectively by Field survey method. Based on the study, estimated replenishment reserve is 32220 m^3.

10. **Mining method**: The sand will be excavated by open cast manual method of mining spread over the river course devoid of water. Transportation would be undertaken through deployment of Dumper & Tractor. Since the depth of sand deposit is 1.0m, excavator, handpicks, spade, hand shovel will be used by labourers for extracting & loading of sand.

11. **Water requirement**: Total water requirement is 5.0 KLD for proposed project.

Activity	Calculation	KLD
Drinking	@ 10 lpcd per labor 10*23/1000= 0.23 KLD	0.23
Dust Suppression	**Total approach road to be water sprinkled** = 600 m 600 m*6m*0.5 *2 times/1000= 3.60 KLD	3.60

Jnayak
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Plantation	590 plants (during plan period) @ 2 L/per plant= 590*2lts= 1180/1000= 1.18 KLD	1.18
Total		**5.01 ~ 5.0**

12. **Baseline study details**: Baseline Study conducted during Oct 2022 to Dec 2022.

13. **Greenbelt development**:590 plants are to be planted as greenbelt development for proposed project.

Year	No. of plants along both side of approach road	No. of plants in buffer zone consulting with local authorities
1st	Excavation	
2nd	550	40
3rd	Care and Maintenance	
4th		
5th		
Total	**550**	**40**
Total	**590**	

14. **Manpower requirement**: 23 nos of manpower is required for the proposed project.

15. **Project cost**: The Estimated cost of the Project Cost is 10 Lakhs. EMP Cost includes capital cost of 2.68 Lakhs and recurring cost of 4.33 Lakhs.

Table: BUDGET FOR ENVIRONMENTAL PROTECTION

Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling	-----	2,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	------	50,000 40,000 20,000 10,000
3.	Green belt development	1,18,000	50,000
4.	Maintenance of haul road	1,50,000	63,000
Total		**2,68,000**	**4,33,000**

Table: CER budget

Sl. No.	Activity	Capital Cost (inRs.)/annum
1.	Skill development program camps like computer learning, sewing etc. in Kadambiriguda village.	10,000
2.	Distribution of educational kits to the poor students of village Kadambiriguda.	10,000
TOTAL		

Jnayak
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	20,000/-

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

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 for the proposal valid upto lease period with stipulated conditions as per **Annexure – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B**.

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) 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.

d) Provision of Bio-toilet shall be made at the site.

e) 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.

f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

g) No natural water course shall be obstructed or diverted for the purpose of sand mining.

h) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

ITEM NO. 13

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BANKEDA SAND QUARRY OVER AN AREA OF 12.900ACRES OR 5.220 HA HAVING KHATA NO. 184, PLOT NO. 1035,1036,1037 IN VILLAGE BANKEDA UNDER TARBHA TAHASIL OF SUBARNAPUR DISTRICT OF TAHASILDAR TARBHA - EC

1. This proposal is for Environmental Clearance of Bankeda Sand Quarry over an area of 12.900Acres or 5.220 Ha. having Khata No. 184, Plot No. 1035,1036,1037 in village Bankeda under Tarbha Tahasil of Subarnapur District of Tahasildar Tarbha.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. Quarry lease has been granted by the Tahasildar, Tarbha, O/o-Tahasildar, Tarbha, Dist - Subarnapur, Odisha, Pin-767016 for five financial Years and will be auctioned after grant of EC.
4. The mining plan was approved by Sri A.K Rout, JDG, Zonal Survey, Bolangir vide letter no.1354/BZ and date.03.06.2020.
5. Mining lease is an identified sairat source in the DSR page No.55, Sl.no.93, Annexure-II. The said mine is a New Mine.

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6. **TOR details**: Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal No.-SIA/OR/MIN/62431/2021, vide File No. no. 62431/120-MINB1/04-2021vide letter no. 1516/SEIAA on 17/06/2021.

7. **Public hearing details:** Public hearing was conducted on 31.03.2023 at village Bankeda under TarbhaTahasil of Subarnapur District, Odisha at 10.00 AM. Issues raised during the public hearing are road construction, purchase of sand at reasonable price and environmental pollution. An amount of Rs. 30, 000 has been allocated for CER activity.

8. **Location and connectivity**: The proposed project is located at Khata no-184, Plot No-1035, 1036 & 1037 in village Bankeda under Tarbha Tahasil of Subarnapur district bounded by Latitude: N20°40'38.10" to N20°40'22.60" and Longitude: E83°44'10.97" to E83°43'00.29" bearing Toposheet No 64P/10.River embankment and river bridge is 0.7k.m away from the site. Nearest railway station is Bichhupali Railway Station 13.9km and nearest airport is Veer Surendra Sai Airport, Jharsuguda is at about 142 km.

9. **Total Reserves and proposed production**: The proposed production for the said project is 5000cum/Year.

	YEAR	Surface area in m^2	Thickness in mtr	Volume of sand 100% recovery (m^3)
Bankeda Sand quarry	1^{ST} YEAR	5000	1	5000
	2^{ND} YEAR	5000	1	5000
	3^{RD} YEAR	5000	1	5000
	4^{TH} YEAR	5000	1	5000
	5^{TH} YEAR	5000	1	5000
TOTAL				25000

As per Approved Mining Plan	
Geological Reserve	**Mineable Reserve**
`52205	43659

10. **Replenishment study details:** Replenishment Study Report has prepared by Drone method. Pre-monsoon Survey was conducted on 02.06.2023 and Post Monsoon Survey-was conducted on 20.10.2023. 17411.3301 cum of sand has been replenished annually. Average thickness during Pre-monsoon period measured from contour value of 580 numbers of grid points- 125.7971 m & average thickness during post-monsoon period is 126.9247. Deposit of sand thickness is 126.9247 m- 125.7971 m=1.127586 or say 1m.

11. **Mining method**: Open cast manual mining method will be adopted for the proposed project with production capacity of Max 5000 m^3/year.

12. **Water requirement**: Total water requirement is 5.0 KLD for proposed project.

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S. No.	Particulars	Quantity (KLD)	Source
	Dust Suppression (on haul roads etc)	2.0	Water will be sourced from nearest available source.
	Green Belt Development/ Plantation	1.0	
	Drinking/Domestic & Sanitation	2.0	
Total		5.0	

13. **Baseline study details**: Baseline study of the study area was conducted during pre-monsoon from 1st March 2022 to 31st May 2022 for Bankeda Sand Quarry.

- **Air Quality:**PM10 levels were ranging from 51.9 to 89.7 µg/m3. PM2.5 levels were ranging from 21.7 to 42.2 µg/m3. SO2 levels were ranging from 4.1 to 12.7 µg/m3. NOx levels were found ranging from 9.30 to 22.8 µg/m3.
- **Noise Quality:**The noise levels varied in the study area during day time from 43.5 dB (A) Leq to 3.4 Leq dB (A) at T-Point where Vehicle Movement is Higher which is increase the noise level. The night time noise level in the study area is in the range of 36.5 (A) Leq to 49.1 Leq dB (A) at T-Point because, because Due to surrounding activities of Project site.
- **Ground water monitoring results:** pH ranges from 7.19 to 7.63. TDS in samples ranges from 72 mg/l to 129 mg/l. Total Hardness in the water ranges from 165 mg/l to 297 mg/l. Calcium content in the water ranges from 59.4 mg/l to 195.3 mg/l, Magnesium content in the water ranges from 5.8 mg/l to 10.5 mg/l. Total alkalinity in the water samples ranges from 13 mg/l to 23.4 mg/l. Chlorides range from 59.4 mg/l to 195.3 mg/l.
- **Surface water monitoring results:** All samples were colourless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 7.26 – 7.68). TDS in samples ranges from 119 mg/l to 427 mg/l. Total hardness in the water ranges from 72 mg/l to 129 mg/l. Calcium content in the water ranges from 14.4 mg/l to 51.7 mg/l, Magnesium content in the water ranges from 6.5 mg/l to 23.2 mg/l, Total alkalinity in the water samples ranges from 14.4 mg/l to 51.7 mg/l. Chloride ranges from 19.6 mg/l to 34.6 mg/l.
- **Soil monitoring results:** All the samples showed pH in the range from 6.84 – 7.69. Conductivity of the samples were in the range from 0.09 µmhos/cm –0.48 µmhos/cm. Moisture were in the range from 8.5% to 18.4%. Organic Carbon ranges from 0.19% - 0.49%. Organic Matter ranges from 0.33% - 0.84%. Phosphorus in the samples ranges from 43.6 mg/kg- 86.5 mg/kg. Total Nitrogen ranges from 126 mg/kg- 149 mg/kg. Potassium in the samples ranges from 159 mg/kg - 354 mg/kg. Calcium in the samples ranges from 136 mg/kg - 246 mg/kg. Magnesium ranges from 22 mg/kg – 72 mg/kg. Chloride ranges from 109 mg/kg- 267 mg/kg.

14. **Greenbelt development**:50 trees per year will be planted as greenbelt development for the proposed project.

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Year	Number of saplings purposed	Location	Type of saplings
1st Year	50	Plantation is carried out safety zone of the lease area(river bank areas)	Teak, Mango, Jammu, Jhaun, Neem etc.
2nd Year	50		
3rd Year	50		
4th Year	50		
5th Year	50		
Total	250		

15. **Manpower requirement**: For the proposed project, 13 persons are required as manpower.

Designation	Number of persons (Bankeda Sand Quarry)
Supervisory Personnel/ Statutory Personnel	1
Semi-skilled Laborer	1
Unskilled Laborer	8
Total	10

16. **Project cost**: The estimated project cost is Rs. 10 lakhs, with EMP Capital Cost of Rs. 1, 45,000 and recurring cost of 75,000.

S.no	Particulars	Capital Cost	Annual Recurring cost
1	Pollution Control	55,000	20,000
2	Pollution Monitoring	25,000	10,000
3	Afforestation along Approach road	35,000	25,000
4	Occupational health and safety	30,000	20,000
5	Reclamation /Rehabilitation of mined out area	-	-
Total		1,45,000	75,000

17. **Environment Consultant**: The Environment consultant **M/s Green Circle Inc., Gujurat** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Green Circle Inc., Gujurat** 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 – A** and following specific conditions:

a) Amended EIA Notification dated 25th 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 – B**.

b) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1st year to a capacity of 60% of annual production capacity as approved in the mining plan.

c) 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.

Jnayak
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d) Provision of Bio-toilet shall be made at the site.

e) 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.

f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

g) No natural water course shall be obstructed or diverted for the purpose of sand mining.

h) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

ITEM NO. 14

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KHANJAMAHAL STONE QUARRY (CLUSTER APPROACH) OVER AN AREA OF 244.50 AC./98.94 HA. (KHATA NO 144, PLOT NO-161, 165, 164, 318, 168, 167, 166, 266, 287, 264, 265, 263) IN VILLAGE KHANJAMAHAL, UNDER SORO TAHASIL IN BALASORE DISTRICT OF REVENUE AND DISASTER MANAGEMENT DEPARTMENT - EC

1. This proposal is for Environmental Clearance for Khanjamahal Stone Quarry (Cluster Approach) over an area of 244.50 Ac./98.94 Ha. (Khata No 144, Plot No-161, 165, 164, 318, 168, 167, 166, 266, 287, 264, 265, 263) In Village Khanjamahal, under Soro Tahasil in Balasore District of Revenue and Disaster Management Department.
2. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
3. The project proponent for the 61-cluster stone quarry is Tahasildar, Soro. After grant of Environmental Clearance all the lease will be auctioned to successful bidder.
4. It is a cluster of 61 nos stone quarries. Out of the total 61 mines, 46 nos are existing and 15 nos are new.
5. Mining lease is an identified sairat source in the DSR page no.11 to 13 si.no.1 to 63 Annexure-II
6. The mining plan was approved by the Deputy Director Geology & Authorized Officer, The Directorate of Geology, Bhubaneswar, Odisha vide Letter No. GXVII(g)-86/21-6334/DG, Dt. 30.10.2021
7. **TOR details**: Terms of Reference (TOR) was issued by SEIAA, Odisha, vide proposal No.SIA/OR/MIN/429196/2023, dated 21st September 2023.
8. **Public hearing details:** Public hearing was conducted on Gram Panchayat office of Mahumuhan, dated 11.12.2023.Issues raised during public hearing are control of flying dust during operation of stone quarries and transportation, plantation in stone Quarry areas, road side and Government Forest land for control of flying dust, construction of 2 lane PWD road from soro to Bagudi, utilization of DMF in the local area for developmental work, development of hospital, school, drinking water facility & road communication, development of road condition from soro to Bagudi, reserve for 30% to 40% of stone quarry out of proposed stone quarry for local people, employment of local labour in the stone quarries, movement of heavy vehicles as per carrying capacity of road and for control of speed and blasting in quarries affecting the health of people,

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damaging nearby houses and losing fertility of nearby agriculture lands by deposition of stone splinters.50 lakhs has been incurred for action plan of public hearing.

9. **Location and connectivity**: The proposed project is located at (Khata No-144, Plot No-161, 165, 164, 318, 168, 167, 166, 266, 287, 264, 265, 263) in village Khanjamahal & Mahumuhan, under Soro Tahasil in Balasore district of Odisha. The site is bounded by Geo Coordinate: Latitude: 21°21'31.64"N to 21°21'29.51"N, Longitude: 86°39'57.58"E to 86°39'56.90"E bearing Topo sheet no F45 O11, Kissam of Land Parbat-I, Parbat-III, Pahad, Village Road passes adjacent to the mine lease. NH-16 passes at soro at distance of 6.14 KM. SH-19 at a distance of 15.12 KM, Major PWD road at a distance of 3.06 KM, There is no such river within 10 km radius, Khania bridge at a distance of 10.93 KM, village road at a distance of 0.51 Km, nearest transmission line at a distance of 1.42 km, Nearest embankment is at a distance of 10.93 KM, Adjacent village is Khanjamahal. Kuldiha Reserve Forest is 1.05 KM from the mine lease boundary.
10. The proposed area is not located in ESZ. However, Kuldiha Wildlife Sanctuary Eco sensitive zone is at a distance of 0.51 KM. Sanctuary boundary is at a distance of 1.05 KM.
11. **Total Reserves and proposed production**: As estimated, Geological reserves is 39.608 Million Cum, Mineable reserves is 20.881 Million Cum and proposed production is 2.484 Million Cum/Annum.

Year	Volume (Million m^3)
1ST YEAR	2.484
2ND YEAR	2.484
3RD YEAR	2.484
4TH YEAR	2.484
5TH YEAR	2.484
TOTAL	**12.427**

12. **Mining method**: Open Cast semi-mechanized Mining method shall be adopted for the proposed project with proposed production of 2.484 Million Cum/Annum. Total production in 5 year plan period is 12.427 Million Cum. Depth of mining is 10m. Shovel, dumper, Rock drill, compressor, excavator & loader will be used for mining. Transportation will be done by Trucks.
13. **Water requirement**: Total water required for the proposed project is 164 KLD.

S. No	Description	Water Requirement (KLD)
1	Drinking & Domestic purpose	31.2
2	Dust suppression	82.0
3	Green Belt	50.8
Total		**164.0**

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14. **Waste generation and management:** A total of 2.972 Million m^3 of waste will be generated during this plan period, which will be dumped temporarily at the designated place as per the approved Mining Plan and subsequently utilized for road construction and maintenance during the plan period.

Summary of Development/Production Calculation of Khanjamahal Cluster		
Category	**Items (M3)**	**Total Volume (M3)**
A	B	C
Development/Production In 5 Years (of 61 Quarries PRESENT IN CLUSTER AREA)	Volume of Total Excavation	12247110
	Volume of Recoverable Stone (90%/80%/75%)	9275013
	Volume of waste (10%/20%/35%)	2972102

15. **Baseline study details**: Base line data collected during March-2023 to May 2023.

- **AAQ results**: The monitoring results of ambient air quality were compared with the National Ambient Air Quality Standards (NAAQS) Prescribed by MoEFCC; GoI Notification dated 16.11.2009. The baseline levels of PM10 (26.6 – 72.2 µg/m³), PM2.5 (15.9 – 43.3 µg/m³), SO2 (3.2 – 8.7 µg/m³), NO2(11.1 – 30.5 µg/m³), While thus it was found that concentration of pollutants was within the limits of NAAQ standards.
- **Surface water quality**: 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 from7.18 to 7.91 and within the limits (6.5 – 8.5) of IS 2296:1992. The Electrical Conductivity (EC) of the collected surface water ranges from 290µS/cm to 980 µS/cm. The chloride content in the collected surface water ranges from 51 mg/l to 153 mg/l. The sulphate content in the collected surface water sample ranges from 12.7 mg/l to 38.1 mg/l. The Total hardness of the collected surface water sample ranges from 63.5 mg/l to 318.5 mg/l. COD of the collected surface water sample ranges from 12.1 mg/l to 36.1 mg/l. BOD of the collected surface water sample ranges from 1.2 mg/l to 1.9 mg/l.
- **Ground water quality**: Physio-chemical characteristics of ground water samples collected from the selected villages during Pre-monsoon 2023. The Ground water results were compared with drinking water standards (IS 10500:2012). The ground water results of the study area indicate that the pH range varies between 7.08 and 7.68. It is observed that the pH range is within the limit of IS 10500:2012. The Total Dissolved Solids range varies between 416 mg/l –1475 mg/l for the 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 1000 mg/l. The chloride content in the ground water for study area ranges between 116 mg/l –413 mg/l. It is observed that all are well within the permissible limit of IS 10500:2012. The desirable limit of the sulphate content is 200 mg/l and permissible limit is 400 mg/l. The sulphate content of the ground water of the study area varies between 29.1 mg/l – 103.2 mg/l. It

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is observed that all the samples are within the permissible limit and Acceptable 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 permissible limit. These interpretations relate to the sample tested for location only.

- **Soil quality**: Eight locations in and around the proposed project were selected for soil sampling. The pH of the soil samples ranged from 7.25 to 8.28. Indicating that the soils are Neutral to moderately alkaline in nature. Conductivity of the soil samples ranged from 131µmhos/cm to 375 µmhos/cm. Nitrogen content ranged from 171 kg/ha to 521 kg/ha. Phosphorous ranged from 33 kg/ha to 75 kg/ha. Potassium content ranges from 205kg/ha to 858 kg/ha

16. **Greenbelt development**: Total plantation in 5 years will be 13113 numbers. The plantation proposed in the buffer area and avenue plantation will be carried out in open places in and around the quarry lease area. The budget for Afforestation will be around Rs. 19,66,950/-.

Year	No. of samplings	Species
1st	2625	Mango, Subabul, Chakunda, Karanja, Neem
2nd	2622	
3rd	2622	
4th	2622	
5th	2622	
Total	**13113**	

17. **Manpower requirement**: The manpower required for the proposed project is 1348 (Direct).

18. **Project cost**: Estimated cost of the project cost is 610 lakhs (6.10 Crore) & EMP cost 91.50 Lakhs.CER budget includes 12.2 lakhs.

S. No.	Environmental Work	Capital cost in rupees	Recurring cost in rupees
1	Water sprinkling for dust suppression	Rs.8,00,000/-	12,00,000/-
2	Greenbelt	Rs.19,66,950/-	15,00,000/-
3	Retaining wall, Garland Drain	Rs.15,00,000/-	6,00,000/-
4	Septic tank and related	Rs. 5,00,000/-	1,00,000/-
5	Environmental monitoring	Rs. 18,61,050/-	10,00,000/-
6	First aid Facility	Rs.5,00,000/-	5,00,000/-
7	PPE kit	Rs 20,22,000/-	20,22,000
Total in Rupees		**91,50,000/-**	**69,22,000/-**

19. **Environment Consultant**: The Environment consultant **M/s EHS360 Labs Pvt. Ltd., Chennai**along with the proponent made a presentation on the proposal before the Committee.

Environmental Scientist, SEAC

Considering the information furnished and the presentation made by the consultant **M/s EHS360 Labs Pvt. Ltd., Chennai**along with the project proponent, the SEAC recommended the following information to be submitted by the proponent;

i. Submit authenticated Eco-sensitive Zone Map and certified copy from concerned DFO that the lease area is not coming within notified Eco-sensitive zone of Kuldiha Sanctuary and distance of the boundary of Kuldiha Sanctuary is 1.03 Km from the proposed site.

ii. Brief note on blasting management, storage of explosive and SOP to be followed for blasting in all leases.

iii. Layout plan showing the accessible roads to all the lease areas.

iv. Note on truck parking plaza and truck route movement and transportation route.

v. The proponent shall keep No mining zone from nearest habitation.

vi. Note on Magazine Management.

vii. Note on management of surface runoff during monsoon.

MEMBER SECRETARY, SEAC

Environmental Scientist, SEAC

ANNEXURE- A

STANDARD ENVIRONMENTGAL 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

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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 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

Trayak,
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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.

Jnayak
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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.

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Annexure - B

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": 1/4the part of the river width (excluding 3/4the 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 : ≥2.5 km b) Area of mining lease area is a cluster: ≤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 : ≤ 3 meter (maximum 3 meter)	4.3 (Para - m) Page - 24
6.	Mining distance from river bank: 1/4th 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 : ≤60% of mine lease area	4.3 (Para - s) Page - 25
8.	Minable sand per ha. Available for actual mining : ≤60,000 MT/Annum	
9.	Regular replenishment study and replenishment rate	

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ANNEXURE - C

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. MAX RAMPUR FORTUNES PRIVATE LIMITED FOR SIDINGPADAR QUARTZ MINES OVER AN AREA OF 12.26ACRE OR 4.9617HECTARES IN VILLAGE SIDINGPADAR UNDER M. RAMPUR TAHASIL OF KALAHANDI DISTRICT OF SRI DURGESH KUMAR UMAR VAISHYA – EC.

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 carried

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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 PM_{10} and $PM_{2.5}$ 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

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and allows only species adopted 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 toprevent 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 7.5 m 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

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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 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.

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ANNEXURE -D

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

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

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parameters and allows only species adopted 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 toprevent 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.

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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

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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 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.

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