

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 17TH MAY 2024**

The SEAC met on 17th May 2024 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

- | | | |
|------------------------------|---|-----------------------|
| 1. Sri Sashi Paul | - | Chairman (through VC) |
| 2. Dr. K. Murugesan | - | Member Secretary |
| 3. Dr. Rabi Narayan Patra | - | Member (through VC) |
| 4. Dr. Chittaranjan Panda | - | Member |
| 5. Prof. (Dr.) H.B. Sahu | - | Member (through VC) |
| 6. Prof. (Dr.) Abanti Sahoo | - | Member (through VC) |
| 7. Er. Fakir Mohan Panigrahi | - | Member (through VC) |
| 8. Prof. (Dr.) B.K. Satpathy | - | Member |
| 9. Er. Kumuda Ranjan Acharya | - | Member |
| 10. Shri Jayant Kumar Das | - | Member (through VC) |
| 11. Dr. Ashok Kumar Sahu | - | Member (through VC) |
| 12. 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 OF M/S ODISHA BRIDGE & CONSTRUCTION CORPORATION LIMITED (OB&CC) FOR REDEVELOPMENT OF ACHARYA HARIHAR POST GRADUATE INSTITUTE OF CANCER (AHPGIC) HOSPITAL OVER AN BUILT-UP AREA 123163.223 SQM AT: MANGALABAG, MEDICAL ROAD, P.S- MANGALABAG, TAHASIL - CUTTACK, DIST - CUTTACK OF SRI PRADIPTA KUMAR BAL - EC

1. This proposal is for Environmental Clearance of M/s Odisha Bridge & Construction Corporation Limited (OB&CC) for Redevelopment of Acharya Harihar Post Graduate Institute of Cancer (AHPGIC) Hospital over an built-up area 123163.223 sqm At: Mangalabag, Medical Road, P.S- Mangalabag, Tahsil- Cuttack, Dist-Cuttack of Sri Pradipta Kumar Bal.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) - Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** The proposed site is located at Mangalabag, Medical Road, P.S- Mangalabag, Tahasil - Cuttack, Dist - Cuttack, Odisha. The Geographical coordinates of the project site is: Latitude – 20° 28' 30.83" N & Longitude – 85° 53' 22.13" E. Nearest NH - National Highway-16 is about 3.35 Km away from the project site. Nearest Railway Station - The Cuttack Railway Station is at a distance of about 2.57 Km from the project site. The Biju Patnaik International Airport at a distance of about 32 Km from the project site. The site is coming under

Cuttack Development Authority. The project site doesn't fall under CRZ area and the Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC.

4. List of Statutory Clearances obtained:

- a. NOC from Airport Authority has been obtained vide letter number BHUB/EAST/B071823/769991 dated. 16.08.2023 and valid up to 15.08.2031.
- b. Bio-medical waste authorization has been obtained from SPCB, Odisha vide letter number 4259/IND/IV-BW-35/SPCB/Authorization (Biomedical Waste) dated. 29.04.2019.
- c. Works Department (Government of Odisha) has allocated the proposed project to OB&CC Vide Letter Number-07731800012022/14066/W Bhubaneswar dated 10.10.2022.
- d. Building Plan for the proposed project has been submitted to CMC for approval.

5. The total plot area 36952.63 sq.mt. with total built-up area 123163.223 sq.mt..

6. Area Statement:

Particular	Existing	Proposed
Plot Area	36952.63	36952.63 sqm
Ground Coverage	15562.82 sqm	17157.964 sqm
FAR	--	3.191
Hospital Building	--	90533.084 Sqm
Service Block- 1	--	4890.539 Sqm
Service Block- 2	--	2585.00 Sqm
Retained Buildings	--	25154.60 Sqm
Total Built up Area	39458.07 sqm (Retained-25145.60 Sqm) (Demolished -14303.47 Sqm)	123163.223 sqm
Open Parking	--	29256.00 sqm
Basement Parking	--	5254.71 sqm
Total Parking Area	--	34510.71 sqm
Green Area	--	8633.87 sqm (23.36%)
Max. Height of the Building	32 meter	59.5 meter
Power/Electricity Requirement & Sources	Total Power- 3500 KW, Source - TPCODL	Total Power- 7720 KW, Source - TPCODL

No. of DG sets	1712.5 kva 750 Kva(2 no's) + 380Kva (1 no's) + 125Kva (2 no's) + 200Kva (1 no's) + 62.5Kva (1 no's) + 10Kva (2 no's)	6 Nos. 2250 KVA
Water requirement & Sources		624.4 KLD, Source - Municipal Water Supply(WATCO)
Sewage Treatment & Disposal	ETP – 50 KLD	STP Capacity - 700 KLD ETP Capacity – 60 KLD
Solid Waste Generation	--	300.0 kg/day
Bio-medical Waste Generation	--	1762.5 kg/day
Estimated Population- Residential, Floating/ visitors, Commercial	Existing Hospital Bed-525 Nos	Hospital Bed-1175 Nos. Floating- 2000 Nos.

7. **Water requirement:** Fresh make up of 624.0 KLD will be required for the project which will be sourced from Municipal Water Supply (WATCO).

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)	Water Requirement (KL/Day)		
				Domestic	Flushing	Total
1.	Hospital Beds	1175	450	352.5	176.3	528.8
2.	Floating Population	2000	15	10.0	20.0	30.0
3.	Assumed Kitchen (hospital & Aahar Kendra)	--	--	30.0	--	30.0
4.	Laundry	--	--	40.0	--	40.0
5.	Filter Backwash	--	--	10.0	--	10.0
Total				442.5	196.3	638.8
Fresh Water for HVAC				181.9	-	181.9
Total Water Requirement				624.4	196.3	820.7

8. **Wastewater details:** Total waste water generated from the Hospital Complex is 550.3 KLD which is treated in ETP & STP having Capacity of 60 KLD & 700 KLD respectively..

9. **Rainwater harvesting details:** Rain Water harvested through 32 nos. of Rain Water recharging pits.

10. **Power Requirement:** Total Power requirement of the proposed Hospital Project is 7720 KW, Source is TPCODL. In case of power cut, 100 % power backup generator will be provided in the hospital. For this purpose diesel generator having 2250 KVA DG Set (6 Nos.) capacities will be provided.

11. **Parking Requirement:** Total parking area provided is 34510.710 Sq.mt. and total 1334 nos. of ECS and location of parking area is basement as well as open.
12. **Fire fighting Installations:** Fire Fighting will be provided as per NBC Norms.
13. **Solid waste generation:** The total solid waste generation and Bio-medical waste generation is as follows:

Solid waste Generation

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Floating/ Visitor	2000 @ 0.15 kg/day/person	300.0 kg/day
Total Waste Generated			300.0 kg/day

Bio-Medical waste Generation

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Patient 1175 beds	1175 @ 1.5 kg/day/bed	1762.5 kg/day
Total Waste Generated			1762.5 kg/day

14. **Greenbelt:** Green belt is developed over an area of 8633.87 sqm which is 23.36% of the total plot area.
15. **Project cost:** The estimated project cost is 666.85 Crores and cost for EMP is 6.67 Crores.
16. **Environment Consultant:** The Environment consultant **M/s. Centre for Envotech & 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 & Management Consultancy Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended the following:

- A. The proponent may be asked to submit the following for further processing of EC application:**
- i) Submit the approval letter from AERB/BARC letter.
 - ii) Submit the waste segregation layout for handling of radioactive wastes.
 - iii) SOP for management and disposal of Construction & Demolition wastes as per guidelines of Construction & Demolition waste of Urban Development Deptt.
 - iv) Detailed layout of parking area, parking facilities provided to patients and land documents for parking area to be submitted.
 - v) Permission letter from concerned authority to utilize SCB open space for parking.
 - vi) Calculate the % of area required for parking based on the new project.
 - vii) Clearance from the concerned authority for parking on river bed.

- viii) From the total 2250 x 6 nos. DG sets 3 nos. will be run and 3 nos. will be kept as standby with the condition that "At any time not more than 3 DG sets will be operated as the 6 DGs load is more than connected load of 7000kW.
- ix) Permission for water utilization from concerned authority. Existing water balance to be provided.
- x) Detailed note on treatment of wastewater generated from the Radiology Deptt.
- xi) The greenbelt along the boundary wall should be increased.
- xii) The proponent shall provide facility for crossing roads from parking space provided to Hospital entry gate.
- xiii) Provision for ramps, foot over bridge for ease of accessibility.
- xiv) Revised water balance for monsoon and non-monsoon period.
- xv) Clarify on where to the HVAC wastewater is discharged.
- xvi) Submit the layout of the internal drainage network and internal road network.
- xvii) Precautionary measures should be taken to prevent mixing of the treated water & storm water.
- xviii) The proponent shall provide proper cover on all the drainage channels.
- xix) Submit the clearance from Airport Authority of India.
- xx) Submit certificate of Structural stability vetted by Institute of repute.
- xxi) Submit report on traffic study vetted by Institute of repute.
- xxii) As the parking space is more than 29000m² and parking built-up area has not been included in the present built-up area, the proponent needs to obtain separate Environmental Clearance for parking. This shall be clarified.

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

- a) Environmental settings of the project site.
- b) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Details of parking facilities proposed.
- e) Drainage network at the site.
- f) Greenbelt development in the existing plant.
- g) Solid waste management practice of the existing plant.
- h) Vacant land available.
- i) Any other issues including local issues.

ITEM NO. 02

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. Z ESTATES PRIVATE LIMITED FOR PROPOSED (B+G+9) STORIED BUILDING FOR DEVELOPMENT OF EWS HOUSING SCHEME UNDER MODEL-1 AMENDED HFA POLICY-2015 OVER AN BUILT-UP AREA 45024.64 SQM PLOT NO.- 164(P), 170(P), 156(P), 210(P), KHATA NO.- 855, MOUZA- BARAMUNDA, BHUBANESWAR, DIST- KHURDA OF SRI TAPAN KUMAR MOHANTY - EC

1. This proposal is for Environmental Clearance of M/s. Z Estates Private Limited for Proposed (B+G+9) Storied Building for Development of EWS Housing Scheme Under Model-1 Amended HFA Policy-2015 over an built-up area 45024.64 sqm Plot No.- 164(P), 170(P), 156(P), 210(P), Khata No.- 855, Mouza- Baramunda, Bhubaneswar, Dist- Khurda of Sri Tapan Kumar Mohanty.
2. **Category:** This project falls under Category "B", Project or Activity 8(a): Building & Construction Projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** The proposed site is located at Mouza- Bermunda, Bhubaneswar, Dist- Khurda, Odisha. The Geographical co-ordinate of the project site is: Latitude- 20°16'24.78"N & Longitude- 85°47'19.45"E. The project site is well connected with National Highway NH-16 at a distance of approx 0.6 Km in East direction. The nearest railway station is Bhubaneswar Railway station at a distance of approx 5.8 Km in South East direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 3.1 Km in South East direction from project site.
4. The site is coming under Bhubaneswar Municipal Corporation (BMC).
5. **Statutory clearances obtained:**
 - BDA has handover the land vide letter no. 14571/BDA, dated 03.05.2023.
 - Water permission from Ground Water
6. The total plot area is 9874.247sqm / 2.44 Ac. /0.99 Ha. with total built-up area 41909.92 sqm.
7. **Area Statement:**

Particular	Permissible	Proposed
Plot Area	Total Plot Area- 9874.247 sqm	
Ground Coverage		3582.377 sqm (36.28%)
Total Built up Area	--	41909.92 sqm
Total FAR Area	--	33507.85 sqm
FAR	4.0	3.35
Maximum Height	--	30 m
Road Area	--	3552.4 sqm
Basement Parking Area	3304.264 sqm	7591.77 sqm
Total Parking		7591.77 sqm
Green Belt Area	1974.85 sqm (20%)	2196.09 sqm (22.24 %)
Green Pavers	--	183.4 sqm
Maximum No. of Floor	--	B+G+9

Power/Electricity Requirement & Sources	--	2332.0 KW Source: TPCODL
No. of DG sets	--	1 x 500 KVA
Solar Energy	--	116.6 KW (5%)
Water requirement & Sources	--	185.0 KLD (Source: Ground Water)
Waste Water Generation	--	242.0 KLD
Sewage Treatment & Disposal	--	STP Capacity- 250 KLD
Solid Waste Generation	--	985.0 kg/day
No. of Dwelling Unit	--	400 Nos.
Estimated Population- Residential, Floating/visitors	--	Residential- 2000 Nos. Floating- 200Nos.

8. **Water requirement:** Fresh make up of 185.0 m³/day will be required for the project which will be sourced from Ground Water.

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)		Water Requirement		
					Domestic	Flushing	Total
1.	Residential Building	2000 nos	Fresh (90)	Flushing (45)	180.0	90.0	270.0
2.	Floating	200 nos	Fresh (25)	Flushing (20)	5.0	4.0	9.0
TOTAL					185.0	94.0	279.0

9. **Wastewater details:** Total waste water generated from the residential building is 242.0 KLD which is treated in STP of Capacity 250 KLD. Out of which 230m³/day will be recycled within the project for flushing (94m³/day), landscaping (14.5m³/day), dust suppression (11.8m³/day) and 109.7m³/day (summer) and 136.0m³/day (non monsoon) will become surplus which will be discharged to drain.

Details	Water (KLD)
Water requirement for domestic purpose	185.0
Wastewater generated from domestic use (@ 80 % of domestic water requirement)	148.0
Water requirement for Flushing Purpose	94.0
Wastewater generated from Flushing (@ 100 % of flushing requirement)	94.0
Total Wastewater generated	148+94 = 242.0
Sewage Treatment Plant Capacity	250.0
STP Loss (5 % of wastewater generation)	12.0
Recycled water form STP @ 95 % of wastewater generated	230.0
Landscaping	14.5
Dust Suppression	11.8

10. **Rainwater harvesting details:** Total 12 nos. of Rainwater harvesting pits will be provided for storage of rain water of quantity 262.24 cum.
11. **Parking details:** Total parking area provided is 7591.77 Sq.mt. and total 237 nos. of ECS and location of parking area is Basement.
12. **Power Requirement:** Total Power requirement of the proposed building is 2332.0 KW, Source is TPCODL, 2 x 500 KVA DG Sets is provided. Total Solar Power Generation is 116.7 KW which is 5.0% of total power required in project.
13. **Firefighting Installations:** Fire Fighting will be provided as per NBC Norms.
14. **Solid waste generation:** Solid waste generated and its management is as follows:

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residential	2000 @ 0.15 kg/day	900.0
2.	Floating	200 @ 0.10 kg/day	30.0
3.	STP sludge		55.0
Total Solid Waste Generated			985.0 kg/day

15. **Greenbelt:** Greenbelt is developed over an area of 2196.09 sqm which is 22.24% of the total plot area. Total 124 nos. of plants to be planted with 3 tier plantation.
16. **Project cost:** The estimated project cost is 75.0 Crores and cost for EMP is 1.7 Crores.
17. **Environment Consultant:** The Environment consultant M/s. Centre for Envotech & 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 & Management Consultancy Pvt. Ltd, Bhubaneswar along with the project proponent, the SEAC recommended the following:

- A. The proponent may be asked to submit the following for further processing of EC application:
- The proponent shall submit the documents for the land and change the kissam of land to 'Gharabari'.
 - Clarification regarding whether the approach road for usage by the project proponent is a government road or private road.
 - NOC/ permission from concerned department for discharge of excess treated water to the nearby existing drain.
 - Submit the agreement letter with Bhubaneswar Development Authority for approval of construction.
 - Explore possibilities for reducing the water discharge to drains.

- vi) Submit the authorized letter with Bhubaneswar Municipal Corporation for taking up of all the organic waste generated. Else there should be provision of Organic Waste Converter within the premises.
- vii) Submit the relevant document on the bylaws for provision of parking space that is followed by the proponent.
- viii) Submit the document of handing over of the land by the Government to the proponent for taking up of the EWS provision.
- ix) Details of changes made in presentation w.r.t online documents submitted in Parivesh Portal.
- x) NOC/Permission to be obtained from CGWA for usage of ground 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) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Drainage network at the site.
- e) Greenbelt development in the existing plant.
- f) Solid waste management practice of the existing plant.
- g) Vacant land available.
- h) Any other issues including local issues.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. FALCON REAL ESTATE PVT. LTD. FOR EXPANSION OF RESIDENTIAL BUILDING COMPLEX "FALCON TATVA" OVER TOTAL PLOT AREA: 15474.6477SQM WITH TOTAL BUILT UP AREA INCREASE FROM 94209.41 SQM TO 111088.53 SQM AT MOUZA - DUMDUMA,TAHASIL - BHUBANESWAR OF SRI SOUNIK KAJAL KUMAR DASH- EC

1. This proposal is for Environmental Clearance of M/s. Falcon Real Estate Pvt. Ltd for Expansion Of Residential Building Complex "Falcon Tatva" over total plot Area: 15474.6477sqm with Total built up area increase from 94209.41 sqm to 111088.53 sqm at Mouza - Dumduma, Tahasil - Bhubaneswar of Sri Sounik Kajal Kumar Dash.
2. **Category:** This project falls under Category "B", Project or Activity 8(a): Building & Construction Projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. As per the EIA Notification, 14th September, 2006, the existing and expansion built up area is less than 1,50,000 sqm.
4. **Location and connectivity:** The site is located adjacent to the local landmarks, spark furniture and in front of Cosmopolis Residential apartment. Total land required for this proposed project is 15474.6477 sqm 3.82 Ac. or 1.547 Ha. Kisam of land is Gharabaari. The Proposed Construction of Residential Housing Project 1 Blocks (2B+G+22) residential apartment & One Block of (2B+G+2) Society building over plot no. 499/6204,499/6202, 499/6203, 499/6207,

Proceedings of the SEAC meeting held on 17.05.2024

J Nayak
Environmental Scientist, SEAC

499/6206,499/4493,499/4454,496/2534,496/6452,496/6453,496/4145,496/6335,497,498,500,501,493/5958.Khata No-432/5085,432/5086,432/4995,32/2465,432/2254,432/5368,432/5408,2618,432/4870, 432/2128,432/5190,432/5369,432/5370 at Mouza: Dumduma, Tehsil: Bhubaneswar, District: Khurda, Odisha. The project site falls under Topo sheet No.F45T15 of Survey map of India. The project site is well connected to NH-16, adjacent to the project site in NW direction, NH-316 approx. 7.7 km in E direction and SH-13 approx. 12.6 km in SW direction. The nearest railway station is Bhubaneswar Railway Station approx. 8.1 km in NE direction from the project site and Biju Patnaik International Airport is at a distance of approx. 2.4 km in East direction from the project site. The distance & direction of Eco sensitive area is as follows: Ghatikia PF-2.4 km (NW), Chandaka Dampara- Wildlife Sanctuary 3.9 km (N), Bharatapur PF -4 km (N), Mendhashala RF -6.2 km (NW), Dasapur RF- 8.7 km (NW), Ratanapur PF-12.1 Km-(W).

5. The site is coming under Bhubaneswar Municipal Corporation (BMC).

6. **Statutory clearances obtained:**

- NOC from PHD for water supply and sewerage connection to the proposed residential project vide letter no. 16465 on dated 07/11/2022.
- Clearance from CGWA in respect of tapping of Ground water vide their NOC NO: CGWA/NOC/INF/ORIG/2022/17417 On Dt. 28.12.2022
- Revised Application For getting NOC from CGWA :21-4/4468/OR/INF/2022

7. The total plot area is 15474.6477sqm or 3.823 Ac/1.547 Ha. The total Built up Area to be increased from 94209.41 sqm to 111088.53 sqm with Plot Area -16895.90 Sqm.(Possession Area) and NH Road And Drain Affected Area - 1421.25 Sqm.

8. **LULC of project site:**

Land use breakup of net plot area	Area in sqm	% of total plot area
ROOFTOP AREA /GROUND COVERAGE AREA	5256.73	34
Driveway / Paved podium area	3853.23	46
Green area	3094.9	20
Total plot area	15474.6477	100

9. **Area Statement:**

Sl no.	Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
	Plot are involed in proposed project	At Plot No. 499/6204, 499/6202, 499/6203, 499/6207, 499/6206, 501, 499/4493,496/2534,496/6452 ,496/6453,496/4145,497,498, 496/6335, 495, 500, 499/4454, Khata No. 432/5085, 432/5086, 432/4870, 432/5190, 476/2,	499/6204,499/6202, 499/6203, 499/6207, 499/6206, 499/4493, 499/4454, 496/2534, 496/6452, 496/6453, 496/4145, 496/6335, 497, 498, 500,501, 493/5958 Khata No-432/5085, 432/5086,432/4995, 432/2465,432/2254,432/5368,4 32/5408,

Sl no.	Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
		432/4995, 432/2254, 432/5370, 432/5369, 432/5368, 463/48, 432/2128, 432/2465, 2618, 432/5408, at Mouza: Dumduma, Tehsil: Bhubaneswar, District: Khurda, Odisha	2618,432/4870,432/2128,432/5190,432/5369,432/5370 at Mouza: Dumduma, Tehsil: Bhubaneswar, District: Khurda, Odisha
i)	Total Plot Area	17,248.51	16895.9
	a. Land affected by road	429.32	1421.25
	b. Land affected by drain	962.81	
	c. Net Plot Area (a-b)	15,856.37	15474.6477
ii)	Permissible Ground coverage (@30% of net plot area)	4,756.91	
iii)	Proposed Ground coverage ((a), of net plot area)	4,543.20	5256.737824
iv)	Permissible F.A.R ((a), 6% of net plot area)	95,138.22	
v)	Proposed F.A.R ((a),	65,392.80 (4.12% of net plot area)	83837.30 (5.42% of net plot area))
	a. Residential	64,028.52	82051.14
	b. Society area	1,364.28	1786.11
vi)	Non FAR	7,256.11	28921.98(including covered parking)
	a. Residential	7,240.92	84944.39
	b. Society area	15.19	978.77
vii)	Basement Area	21,560.50	25,578.00
	a. Basement level-1	10,987.68	12133.00 (B.U.A) + 574.35 (FAR)
	b. Basement level- 2	10,572.83	12225.03 (B.U.A) + 645.61 (FAR)
viii)	Total Built up area	94,209.41	111088.53
ix)	Maximum Height of the Building (m) (Till Mumtv level)	58.10 m	Block-1: 71.17 M Block-29.20 m
x)	Landscape area (21.43 % of net plot area)	3,398.26	3,398.26
xi)	Parking (Including Visitors Parking)	19636.49 (2,108.528)	25369.11

Sl no.	Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
xii)		618 ECS	7600.44
xiii)	Basement-1 (Lower)-	9,029.30	11205.29
xiv)	Basement-2 (Upper) parking-	9,802.58	11601.05
xv)	Ground Floor	719.61	1940.03
xvi)	Open parking	85	2562.77
xvii)	Roof top rainwater tank 2 nos.	125 KL +120 KL	
xviii)	No. of Dwelling Units	268	346
	a) 3 BHK	68	4
	b) 3.5 BHK	128	84
	c) 4BHK	68	171
	d) Pent house	4	83
xix)	Land use breakup of net plot area		
xx)	Rooftop Area /Ground Coverage Area	3477.1	5256.73
xxi)	Road Area		3853.23
xxii)	Driveway / Paved podium area	8747.8	3853.23
xxiii)	Green area	3398.26	3094.9
xxiv)	Unpaved area	233.21	
xxv)	TOTAL PLOT AREA	15,856.37	15474.6477

10. **Water requirement:** Total water requirement=314 KLD (Drinking + Flushing), fresh water requirement on daily basis =209 KLD and flushing water requirement = 105 KLD. The source of water supply is Ground water /Municipal water supply.

Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
Water Requirement	187 KLD(fresh-131+flushing-56)	314 KLD(fresh-209+flushing-105)
Source	Ground water	Ground water
Wastewater Generated	139 KLD	282 KLD
Treated Waste Water Reuse	56 KLD & 69 KLD discharge to nearest drain	254 KLD
STP capacity	170 KL	285 KL

11. **Wastewater details:** Total waste water generated from the residential building is 282 KLD which is treated in STP of Capacity 285 KLD. Treated waste water recovered from STP -226 KLD, out of which 175 KLD will be recycled within the project. During dry season there will be 50 KLD treated waste water discharged into municipal sewer and 90 KLD will become surplus in monsoon season.

12. **Rainwater harvesting details:** Total 18 nos. of Rainwater harvesting pits will be provided for storage of rain water.
13. **Parking details:** Total parking area provided is 25369.11sqm.
14. **Power Requirement:** Electricity requirement: 5764 KVA and Source of Power is TPCODL, Bhubaneswar. Power Back up source is 4 X 810 KVA = 3,256KVA silent DG Set. Total Solar Power Generation is 300 KW which is 5.0% of total power required in project.

Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
Power Requirement	4139 KVA	5765 KVA
Total Connected Load in Kw		5964 KW
Total Demand Load in KVA		5765 KVA
DG Set	2x1250 kva	4X810 KVA
Solar Lighting	10.12 %	300 KW (5% of total power consumption -5964 KW)

15. **Firefighting Installations:** Fire Fighting will be provided as per NBC Norms.

16. **Solid waste generation:** Solid waste generated and its management is as follows:

Parameter of the proposed project	As Per Previous EC (Area in SQM)	Proposed (Area in SQM)
Solid Waste	1160 kg/day	1166 KG/DAY
Biodegradable	464 KG/DAY	475 KG/DAY
Non-biodegradable	696 KG/DAY	691 KG/DAY

Management:

- Biodegradable waste (619 kg/day) will be treated with OWC (capacity-700 kg/day) and Non-Biodegradable waste through BMC.
- The recyclable material like thermocol, cartoon boxes, Glass, plastic, newspaper waste is given to the rag pickers for recycling.
- The sludge generated from the STP will be directly taken by sludge tank to municipal dump yard.
- Components are being collected in separate bins. The disposal of recyclable and non-recyclable waste and Biomedical waste is being done through the government. Approved agency.

17. **Greenbelt:** The green area 3095 sqm will be developed approx. 20 % of the total plot area. [193 nos. of tree].
18. **Project cost:** The estimated project cost is 472 Cr (Existing-450 Cr+ Expansion-22 Cr) and cost for EMP is capital cost- (Existing-450 Lakh+ Expansion-32 Lakh) 482 Lakh. Annually recurring cost 26.5 Lakh.
19. **Environment Consultant:** The Environment consultant **M/s. Visiontek Consultant Services 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. Visiontek Consultant Services Private Limited, Bhubaneswar** along with the project proponent, the SEAC recommended the following:

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

- i) Justification as to why the proposal will not be considered as violation project as they have applied for Environmental Clearance post-facto.
- ii) Detailed layout of the greenbelt.
- iii) Comparative statement on all environment parameters for the existing and proposed project with justification.
- iv) Half yearly compliance report of the existing Environmental Clearance.
- v) Permission from the Chief Drainage Officer, EIDP for drainage water discharge.
- vi) Permission from NHAI for laying out of connection to the drain. Also, all other relevant clearances as per revised proposals.
- vii) The greenbelt should be increased to a minimum of 20%.
- viii) Submit the Soil test Report carried on the proposed land.

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

- a) Environmental settings of the project site.
- b) To assess the details of the ground coverage for the existing and proposed project.
- c) Extent of construction activity and operational status of all the units.
- d) Road connectivity to the project site.
- e) Drainage network at the site.
- f) Greenbelt development in the existing plant.
- g) Solid waste management practice of the existing plant.
- h) Vacant land available.
- i) Any other issues including local issues.

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S PENGUIN TRADING AND AGENCIES LTD. FOR DANGARAPADA - 1 DECORATIVE STONE DEPOSIT (16.389 HA.), DANGARAPADA - 2 DECORATIVE STONE DEPOSIT (6.24 HA.) & DANGARAPADA - 3 DECORATIVE STONE DEPOSIT (14.921 HA.) OVER TOTAL AREA OF 37.55 HA. LOCATED AT VILLAGE DANGARAPADA, TITILAGARH TAHASIL OF BALANGIR DISTRICT OF SRI RAMAN RASHMI NAYAK - EC

1. This proposal is for Environmental Clearance of M/s. Penguin Trading and Agencies Ltd for Dangarapada-1 Decorative Stone Deposit (16.389 Ha.), Dangarapada-2 Decorative Stone Deposit (6.24 Ha.) & Dangarapada-3 Decorative Stone Deposit (14.921 Ha.) over total area of

- 37.55 ha. located at village Dangarapada, Titilagarh Tehsil of Balangir District of Sri Raman Rashmi Nayak.
2. **Category:** As per the EIA Notification S.O. 1533, dated 14th September 2006 and subsequent amendments, this proposed project falls under Category B (B1 >5.0 Ha) in Schedule in item 1(a) - Mining of Minerals.
 3. DSR for the proposed mining was earlier approved by district collector vide letter no. 820/mines, dated 28.12.2022 & forwarded to SEIAA, Odisha. The same was returned to prepare as per the new guidelines. Letter from Collector office, Balangir vide letter no. 495, dated. 30.12.2023 has been received regarding the preparation of DSR.
 4. The Terms of Reference (TOR) was granted for the proposed project vide letter no. SIA/OR/IND1/413852/2023 on dated 28.07.2023.
 5. Public Hearing for the proposed project was held on dtd. 07.02.2024 at Dangarapada village. Issues raised were mitigation measures to control air, water and noise pollution, maintenance of village road, to implement appropriate measures to ensure proper storage of rain water and conservation for use in irrigation. The proposed project should prioritize providing employment opportunities for residents of Dangarpada village. Additionally the project proponent should actively contribute to the well being of the Dangarpada community and the Dangarpada temple. Reject rocks and stone generated during operation of the project will be made available to local residents. A Budget of 57 lakhs has been assigned for public hearing issues and 1,80,000lakhs for occupational health and safety of the workers.
 6. **Statutory Clearances:**
 - The mining plan of the project has been approved under mineral Concession Rule,2016 and granite Conservation& Development Rule,1999 vide letter no-MXXII-(b)-06/2022 8097/DM Dt.21/09/2023 for Dangarapada 1, vide letter no-MXXII-(b)-06/2022 8357/DM Dt.29/09/2023 for Dangarapada 2, vide letter no-MXXII-(b)-06/2022 8361/DM Dt.29/09/2023 for Dangarapada 3.
 - There is no Forest and DLC land in the lease area, which is approved by DFO, Bolangir Forest Division Letter No.-2166/4F-Misc, and Dated 15.03.2023.
 - LOI was granted for Dangarapada 1 by Steel & Mines Dept, GOD vide letter no. 5947/SM-MC2-MC-0054-2021/SM Bhubaneswar, dated 05.08.2021.
 - LOI was granted for Dangarapada 2 by Steel & Mines Dept, GOD vide letter no. 5939/SM-MC2-MC-0052-2021/SM Bhubaneswar, dated 05.08.2021.
 - LOI was granted for Dangarapada 3 by Steel & Mines Dept, GOD vide letter no. 5943/SM-MC2-MC-0053-2021/SM Bhubaneswar, dated 05.08.2021.
 - Ground water approval for withdrawal of 9.8 KLD has been received vide letter no. CGWA/NOC/MIN/ORIG/2023/19643 on dated 06.12.2023.
 7. The mining plan of the project has been approved under mineral Concession Rule, 2016 and granite Conservation& Development Rule, 1999 vide letter no-MXXII-(b)-06/2022 8097/DM Dt.21/09/2023 for Dangarapada 1, vide letter no-MXXII-(b)-06/2022 8357/DM Dt.29/09/2023 for Dangarapada 2, vide letter no-MXXII-(b)-06/2022 8361/DM Dt.29/09/2023 for Dangarapada 3.

Proceedings of the SEAC meeting held on 17.05.2024

J. Nayak
Environmental Scientist, SEAC

8. **Location and connectivity:** The cluster area consisting of 3 decorative stone mines i.e. Dangarpada-1 Decorative Stone over 16.389 hectares, Dangarpada-2 Decorative Stone over 6.240 hectares & Dangarpada-3 Decorative Stone over 14.921 hectares in village Dangarpada No. 39 under Titilagarh Tahasil of Balangir District, Odisha. The nearest railway is Titilagarh Railway Station (8 km) (SE) & Dangarpada village at 2.5 Km (E) from the project site. The nearest national highway is NH 59 (7.4km) (W). The proposed mine is situated over an area of 37.55 ha in village-Dangarpada, Titilagarh Tehsil, in the district of Bolangir of Odisha state. The area featured in Toposheet no. - F 44 X 3(64P/3). The Dangarpada 1 is bounded by the latitude N 20 °21'18.7 to N 20°21'30.0" & longitude E 83°09'08.0" to E 83°09'34.1". The Dangarpada 2 is bounded by the latitude N 20°21'18.7" to N 20°21'26.9" and longitude E 83°09'46.8" to E 83°09'34.1". The Dangarpada 3 is bounded by the latitude N20°21'17.00" to N 20°21'32.10" and longitude E 83° 09'46.20" to E 8309'07.10". The Barnai reserve forest (0.65km) NE from the project site. There is No wildlife sanctuary in the 10 km radius from the project site. Kankarha Jor SW(8.7 km), Dumberbahal Reservoir (3.2km) N, Mathan Pala Reservoir 6.1 km SE, lakhmi Jor 5.4 km (SW), Jamuna Jor 3.2 km (S), Lant river (7.8 km) NE.
9. The applied M.L. area is located towards North-Western side of village Dangarpada of lease area. Some portions near the northern boundary are covered by soil & alluvium. The highest and lowest elevations of the area above 385.5 mRL (centre- east side) and 303.0 (south direction) mRL respectively in Dangarpada 1. The highest and lowest elevations of the area are above 322mRL and 309.5mRL respectively in Dangarpada 2. The slope of the area is from centre towards lease boundary. The highest and lowest elevations of the area above 329mRL and 306mRL respectively in Dangarpada 3. Overall slope of the area is due south.
10. **Total reserves and production:**
- Dangarpada-1: Proponent intends to produce decorative stone @ 7530 cuM/Annum (Maximum). Total Geological reserve is estimated as 6, 97,545 m³ and total Mineable reserve is estimated as 5,79,588 m³ and the life of the mine will be about 77 years. Out of 131040 m³ waste generated in 5 years, 52416 m³ of waste will be utilized for construction and maintenance of roads and remaining 78624m³ of waste will be dumped in the proposed temporary waste dump in the earmarked site.
 - Dangarpada-2: Proponent intends to produce decorative stone @ 3000 cuM/Annum (Maximum). Total Geological reserve is estimated as 108151 m³ and total Mineable reserve is estimated as 71656m³ and the life of the mine will be about 24years. Out of 47600 m³ waste generated in 5 years, 19040 m³ of waste will be utilized for construction and maintenance of roads and remaining 28560m³ of waste will be dumped in the proposed temporary waste dump in the earmarked site.
 - Dangarpada 3: Proponent intends to produce decorative stone @ 6000 cuM/Annum (Maximum). Total Geological reserve is estimated as 490626 m³ and total Mineable reserve is estimated as 349743 m³ and the life of the mine will be about 59 years. Out of 105000m³ waste generated in 5 years, 42000 m³ of waste will be utilized for construction and maintenance of roads and remaining 63000m³ of waste will be dumped in the proposed temporary waste dump in the earmarked site.

- During the 5 years of the proposed plan period 3.937 hectares will be utilised in Dangarpada-1, 3.697 hectares will be utilized in Dangarpada-2, period 3.482 hectares will be utilised in Dangarpada-3 due to proposed mining and allied activities.

11. **Baseline data monitoring:** The baseline data has been collected for the period December 2022 to February 2023.

AAQ parameters at 10 locations (min. & Max.)	PM ₁₀ = 39.5 to 65.4 µg/m ³ PM _{2.5} = 20.2 to 35.5 µg/m ³ SO ₂ = <4 µg/m ³ to 11.2 µg/m ³ NO _x = 0 µg/m ³ to 12.6 µg/m ³ CO= 0.11 mg/m ³ to 0.34 mg/m ³
Ground Water quality at 8 locations	pH: : 6.14 to 7.56 Total Hardness: 75 to 158 mg/l, Chlorides: 26.4 to 38.5 mg/l, Fluoride: 0.13 to 0.31 mg/l. Ground water quality including Heavy metals concentration are within the permissible limits of IS 10500:2012 and its amendments. Alkalinity ranges from 51 mg/l (GW-6) to 64.0 mg/l (GW-1).
Surface water quality at 8 locations	pH, 7.22 to 7.56 DO: 6.1 to 6.6 mg/l and BOD:2.1 to 2.9 mg/l. COD from < 4 to 32 mg/l & Total Coliform ranges from 7.8 to 26 MPN/100ml. Surface water quality at all the locations are within IS 2296:1992.
Soil quality at 8 locations	pH varies between 6.33 to 9.32, Porosity varies between 43.21 to 71.97, Nitrogen varies between 21.0 to 84.0 mg/Kg, Phosphorous varies between 11.2 to 47.2 mg/Kg and Potassium varies between 0.048 to 0.32 mg/Kg. Organic Carbon Content varies between 0.39 to 3.27 mg/Kg.
Noise levels Leq (Day & Night) at 8 locations	Ambient noise reaches 41 to 71.9 dB (A) during daytime and 36.3 to 66.4 dB(A) during night time.

12. **Product & Waste Generation:**

Dangarpada-1

Year	Volume of Rock Zone (m ³)	Volume of Blocks (20%) (m ³)	Volume of Non-saleable(10%) (m ³)	Volume of waste (70%) (m ³)
1st Year	37245	7449	3725	26072
2nd Year	37390	7478	3739	26173
3rd Year	37415	7483	3742	26191
4th Year	37500	7500	3750	26250
5th Year	37650	7530	3765	26355
Total	187200	37440	18720	131040

Dangarpada-2

Year	Volume of Rock Zone (m ³)	Volume of Blocks (20%) (m ³)	Volume of Non-saleable(10%) (m ³)	Volume of waste (70%) (m ³)
1st Year	12500	2500	1250	8750
2nd Year	13000	2600	1300	9100
3rd Year	13500	2700	1350	9450
4th Year	14000	2800	1400	9800
5th Year	15000	3000	1500	10500
Total	68000	13600	6800	47600

Dangarpada-3

Year	Volume of Rock Zone (m ³)	Volume of Blocks (20%) (m ³)	Volume of Non-saleable(10%) (m ³)	Volume of waste (70%) (m ³)
1st Year	30000	6000	3000	21000
2nd Year	30000	6000	3000	21000
3rd Year	30000	6000	3000	21000
4th Year	30000	6000	3000	21000
5th Year	30000	6000	3000	21000
Total	150000	30000	15000	105000

13. **Method of Mining:** Opencast semi-mechanized method will be adopted using machineries such as Excavator, Wire saw cutter, compressor, jack-hammer, drill rod etc. Mining operation is proposed to be in single shift (8 hours).
14. **Transportation:** Transportation of marketable decorative stone blocks will be done by trailers/lorries/trucks to the respective destinations.
15. **Water requirement:** Total water requirement for the project will be 6.8 KLD for Dangarpada 1, 5.7 KLD for Dangarpada 2 & 7.7 KLD for Dangarpada 3. Ground water approval for withdrawal of 9.8 KLD has been received vide letter no. CGWA/NOC/MIN/ORIG/2023/19643 on dated 06.12.2023
16. **Wastewater management:** Slurry/muddy water will be generated from wire saw cutting machine will be collected in settling pit & further it will reused in process after settlement. Septic tanks and soak pits will be provided for the disposal of domestic / washrooms effluents.
17. **Rain water harvesting:** Rain Water will be collected through garland drains and stored in settling pond. After 4 hours of retention, suspended solids will be settled and clear water will be reused / discharged. Settling tanks will be constructed to arrest the wash-off water.
18. **Power requirement:** There will be Power load requirement of 370KW for operations of mine. Minimal power required for office shall be taken by using D.G set (250 KVA).

19. **Greenbelt:** It is proposed to develop a green belt over an area of 0.621Ha. in the safety zone of Dangarapada-1 , 0.46 Ha. in the safety zone of Dangarapada-2 mine, 0.650Ha. in the safety zone of Dangarapada-3 during the plan period. Plantation will be carried out in undisturbed area.
20. **Solid Waste Management:** During 5 Years proposed plan period, total of 131040 m³ of waste are generated. About 40% (total of 53416 m³) of the generated waste will be utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Remaining (78624 m³) waste will be dumped in the proposed temporary waste dump in the earmarked site. The generated waste will be dumped in one terrace having of 5 m height. The proposed dump slope should be maintained at 80°. Since the dump constitutes of rocky mass, no plantation of saplings on the dump slope is envisaged. Settling tank will be constructed to arrest the wash-off water. No top soil will be generated from proposed mining.
21. **Manpower requirement:** Total number of employee in the proposed mine will be around 20 in each of the mine.
22. **Project cost:** Total estimated project cost of the Dangarapada cluster is Rs.11.4 crore. For the Environmental management Rs.25.8 Lakhs/year will be spent.
- Estimated cost of the Dangarapada 1 project is Rs.4.8Crore, including Rs. 2 Lakhs towards provision for expenditure during mine closure.
 - Estimated cost of the Dangarapada 2 project is Rs.2.2 Crore, including Rs. 2 Lakhs towards provision for expenditure during mine closure.
 - Estimated cost of the Dangarapada 3 project is Rs.4.3 Crore, including Rs. 2 Lakhs towards provision for expenditure during mine closure.
23. **Environment Consultant:** The Environment consultant **M/s Visiontek Consultant Services Private Limited, Bhubaneswar** 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 Visiontek Consultant Services Private Limited, Bhubaneswar**, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent.

- a) Submit the RL of the approach road, bottom RL of the mine before start of mining and after post mining and RL of the nearby surrounding areas close to mine.
- b) Submit the source of water to be utilized for the project.
- c) Detail cost of EMP individually for each mine.
- d) Submit report on traffic study vetted by Institute of repute.
- e) The proponent shall mine the quarry with lowest mRL first and use it as water sump after mining before proceeding to next quarry.
- f) Certificate from Mining Officer that there is no other mines located within 500m from the periphery of the proposed cluster lease area. Tahasildar has given certificate but its

decorative stone hence certificate from Mining Officer is required.

g) DSR is under process. Inclusion of sairat sources in approved DSR.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S ORIENTAL TRIMEX LTD. FOR POTERU DECORATIVE STONE MINE OVER AN AREA OF 4.961 HECTARES IN THE VILLAGE POTERU OF MALKANGIRI DISTRICT OF SRI ANIRUDH MALLICK - EC

1. This proposal is for Environmental Clearance for M/s Oriental Trimex Ltd. for Poteru Decorative Stone Mine over an area of 4.961 hectares in the village Poteru of Malkangiri district of Sri Anirudh Mallick.
2. **Category:** As per the EIA Notification S.O. 1533, dated 14th September 2006 and subsequent amendments, this proposed project falls under Category B (B2 <5.0 Ha).
3. Conditional Mining Lease (LOI) granted by Department of Steel and Mines, Govt. of Odisha letter no. SM-MC2-MC-0007-2021/12009 dated 23.12.2022.
4. The mining plan was approved by Directorate of Mines, Govt. of Odisha vide letter No. MGXXIV(b) – 11 /2023/14769/DoMG. on dated 12.12.2023 valid upto 5 years from the date of lease deed execution.
5. **Location and connectivity:** The project site is located at Plot No – 2377, Village – Poteru, Tahasil – Motu, Malkangiri ,Odisha, Geo – coordinate - Latitude – L-170 56'33.4" to L-170 56'43.8" Longitude - N-810 40'03.01" to N-810 40'10.8", Toposheet No. – E44P/9, KISAM – Patharabani, Nearest S.H MV – 72 State highway Connecting Koraput – Kalimela - Motu at a distance of 5 kms, Nearest N.H MV – 72 National Highway Connecting Koraput – Kalimela – Motu at a distance of 5 kms, Manyamakonda canal is 300 mts away from the M.L. area.
6. **Total reserves and production:** As estimated, the mineable reserve of the proposed project is 1,37,040 cum. The average rate of production of decorative stone during the proposed plan period is 3000 cum per annum.
7. **Land use pattern:**

Sl. No.	Type of land use	Net area considered for financial assurance.	At conceptual stage
1	Area of excavation	0.477	1.874
2	ROM stock yard	0.331	0.331
3	Waste dump	0.184	0.184
4	Stock yard blocks	0.290	0.290
5	Stock yard presently non-salable	0.155	0.155
6	Processing Yard	0.152	0.152
7	Parking	0.122	0.122
8	Roads	0.155	0.155
8	Infrastructure, (first aid, rest shelter Etc.)	0.250	0.250
9	Workshop	0.037	0.037

Sl. No.	Type of land use	Net area considered for financial assurance.	At conceptual stage
10	Safety zone	0.709	0.709
11	Total area utilized	2.740	4.137
12	Backfilled /reclaimed area	0.000	3.023
13	Un-utilized area	2.221	3.847
	Total Area	4.961	4.961

8. **Method of Mining:** Mining is done by semi mechanized with 6m x 9m bench pattern without blasting shall be adopted with a production capacity of 3000 mt per annum, total production in 5 years will be 12600 cum. Proposed mining depth as per approved mining plan, will be from the RL 182 m to RL 155 m. The equipment's to be used are excavator, surface drill, compressor, jack hammer & dumper for transportation. Blocks shall be transferred to polishing units by trailers /trucks.
9. **Waste generation and management:** The generated waste will be 17,920cum during 5 years. It shall be accommodated in the North Eastern side Part of Leasehold area over 0.184 ha. with a height of 7m.
10. **Baseline Study Monitoring:** The baseline study was carried out on 15 Dec, 2023 to 15 Jan, 2024.

AAQ parameters at 8 locations (min. & Max.)	PM ₁₀ = 30.45 to 49.66 µg/m ³ PM _{2.5} = 20.22 to 39.83 µg/m ³ SO ₂ = 4.0 µg/m ³ to 6.8 µg/m ³ NOx= 9.0 µg/m ³ to 18.6 µg/m ³
Ground Water quality at 8 locations	pH: 6.86 to 7.14, TDS: 188-212 mg/l, Total Hardness: 42.65 to 62.12 mg/l, Chlorides: 19.48 to 24.12 mg/l, Fluoride: 0.24 to 0.56 mg/l, Nitrate: 0.22 to 0.24 mg/l. Alkalinity ranges from 42.87mg/l (GW-6) to 56.42mg/l (GW-1).
Surface water quality at 2 locations	pH: 7.08 to 7.14, TDS: 328-296mg/l, Chlorine: 9.12 12.62mg/l and BOD: 11.24 10.46mg/l.
Soil quality at 2 locations	pH varies between 6.2 to 6.8, Porosity varies between 36.3 to 37.1, Nitrogen varies between 2142 - 2312mg/Kg, Phosphorous varies between 326-418 mg/Kg and Potassium varies between 60.2-70.8mg/Kg. Organic Carbon Content varies between 0.3-0.4mg/Kg. Water Holding Capacity(%) 41.3 to 37.8.
Noise levels Leq (Day & Night) at 2 locations	Ambient noise reaches 32.5 to 46.5 dB (A) during daytime and 25.3 to 32.4 dB (A) during night time.

11. **Water requirement:** The total water requirement of the plant is estimated at about 5 KL per day, which shall be sourced from nearby tube wells and nearby ponds. Water will be sourced from the Tube well for drinking and dug well.
12. **Power requirement:** Diesel requirement of 6000litters/month for operation of mining equipment and DG sets for power generation of 250KVA.

13. **Greenbelt:** A green belt along the periphery of the ultimate quarry, over the dump and along the road side will be developed to arrest the air borne particles. An area of 0.709 hectares is proposed for plantation in which a total number of 1772 no's of trees shall be planted in a period of 5 year with annual target of 355 nos.
14. **Manpower requirement:** A total of 20 workers will be employed in the proposed mine.
15. **Project cost:** The approximate cost of the project comes around 5 Cr. The EMP budget incurs 0.5 Cr in the planning period of 5 years.
16. **Environment Consultant:** The Environment consultant **M/s Envomin Consultant Private Limited** 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 Envomin Consultant Private Limited**, the SEAC decided to take decision on the proposal after receipt of the following from the proponent.

- a) Submit the RL of the approach road, bottom RL of the mine before start of mining and after post mining and RL of the nearby surrounding areas close to mine.
- b) A brief note on tentative waste management plan for the project.
- c) Submit a revised DLC certificate from DFO for lease area.
- d) Submit the distance from the nearest sanctuary and its details.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF JARIPUT & JAYAMANGALPUR CLUSTER BLACK STONE QUARRY OVER AN AREA OF 20.965 ACRES OR 8.484 HA. HAVING KHATA NO. 296, 432 PLOT NO. 1112, 1112/1061, 1061 , 1112/1 & 1632 IN VILLAGE JARIPUT & JAYAMANGALPUR UNDER TANGI TAHASIL OF KHORDHA DISTRICT OF TAHASILDAR TANGI- EC

1. This proposal is for Environmental Clearance for Jariput & Jayamangalpur Cluster Black Stone Quarry over an area of 20.965 Acres or 8.484 Ha having Khata No.296,432 Plot No. 1112,1112/1061, 1061 , 1112/1 & 1632 in village Jariput & Jayamangalpur under Tangi Tahasil of Khordha District of Tahasildar Tangi.
2. **Category:** As per the EIA Notification dated 14th September 2006 and its subsequent amendments the proposed project falls under category B of Schedule in item 1 (a) – mining of minerals.
3. The mining plan was approved by Deputy Director Geology, Directorate of Geology, Bhubaneswar, Odisha vide letter no.-GXVII(g) 956/19-2224/DG-.Dt dated 30/03/2021.
4. Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal Letter No.-1287/SEIAA, Bhubaneswar dated 05.05.2021.
5. Public Hearing was conducted on 17.12.2021 at Village community centre, Jariput, Khurda, Odisha. Issues raised were concerning Environment Pollution and its control and mitigation measures. Blasting, its adverse impact on human health, Agriculture field School going Children. Issues concerned local employment, Transportation road condition, CSR activity and peripheral development. Green belt will be affected and Gramya jungle like kaju jungle will be affected.

Proceedings of the SEAC meeting held on 17.05.2024

J Nayak
Environmental Scientist, SEAC

Ground water impact due to over mining. Dust suppression on the road connecting to National Highway. Demarcation of lease hold area, excavation quality of minor mineral to be looked after by the village co-ordination committee along with officials of District Administration. CSR activity as per public hearing issues raised 15,00,000 lakhs as capital cost and 5,00,000 lakhs as recurring cost.

6. **Location and connectivity:** The site is located at Village-Jariput and Jayamangalpur, Tahasil-Tangi, District-Khordha, Khata No. & Plot No.-Khata No. 296, Plot No. 1112, 1061, & 1632, Kisam-Mundia. The geographical co-ordinates are Latitude: N19° 51'18.5" to N19° 51'33.9" Longitude: E85° 18' 31. 5" to E85° 18' 43.6". The project site falls under Topo sheet No. E45B5 of Survey map of India. The nearest village is Jariput about 1.50 km, Nearest Town/City-Khordha about 48 km, Nearest Railway Station-Kuhuri Railway Station-4.3 Km, Nearest Airport-Biju Patnaik International Airport at about 68.70 km, Nearest Highway-SH-1 about 10 km, Nearest NH-NH- 16 is 0.6 km, Nearest reserve Forest-Kuhuri Reserve Forest about 4 Km, Nearest distance of Approach Road-0.6k.m, Nearest water body-Pond at about 0.30 Km. there are No national parks and sanctuary within 10 km. it falls under the Sismic Zone Zone – II as per IS: 1893 (Part-I): 2002. Nearest Habitation is Jariput about 1.50 km.
7. Total cluster area is 8.484 ha. Consisting of Jariput A, Jariput B, Jariput C, Jariput D, Jariput 6, Jariput 9, Jariput 10, Jayamangalpur – 1, Jayamangalpur – 2& Jayamangalpur – 3 located at Village: Jariput & Jayamangalpur, Khata No. 296, Plot No.1112,1061 & 1632, Kisam Pahad, Tehsil: Tangi, District: Khordha, Odisha. Pahad Kissam.
8. **Total reserves and production:** As per MGQ certificate given by Competent Authority the proposed production is 3,60,000 m³/year.

As per Approved Mining Plan		As per Approved Mining Plan
Geological Reserve	Mineable Reserve	Production
9,41,485 m ³	5,31,107 m ³	3,60,000 m ³ /year

9. **Method of Mining:** Mining operations will be carried out by Semi-mechanized opencast mining method. The topsoil will be used for greenbelt development and mine waste will be stacked separately, will be used as road building material. Muffled blasting will be carried to reduce the ground vibration, fly rock etc. due to blasting. The capacity of the proposed production for Stone is 3,60,000 m³/year & capacity of 18,00,000 cum stone for five years.
10. **Bench geometry:** Conventional method of mining will be adopted in cluster-1 area. In the present plan period it is proposed to shape the quarry with bench heights of 3m to 6m (max.) the slope of individual bench will be maintained around 80° to 85° with ultimate pit slope of less than 45°.
11. **Transportation:** Mined out material will be loaded into the dumpers with the help of JCB and will be send to the nearby established crusher outside the lease area and finally the material of commercial use as per the demand of the market will be transported by Covered trucks / dumpers to its final destination.

12. **Waste generation and management:** The Cluster-1 area is partly covered with soil mixed rock boulders/pebbles followed by granite gneiss/charnockite/migmatite deposit. The soil to be generated will be stacked in the earmarked temporary soil stack of the individual QL holders and will be utilised for the plantation purpose to be undertaken around the respective hillock/patch and adjacent to haul roads of the same in Cluster-1. Moreover, as envisaged, waste to the tune of about 30% of excavation will be generated during mining part of which will be utilised by the respective Lessee for making of mine road and allied infrastructures. Around 2/3rd of the generated waste will be transported to the crusher site along with valuable building stone/road metal where these will be sorted out. The remaining 1/3rd of the total waste will be separated at the quarry head and will be stacked in the temporary waste dump of respective quarry lease and will be utilised by the lessee for making of mine road and allied infrastructures. If required, the portion of soil unsuitable for plantation and the wastes will be sold out to intending users for construction purpose after obtaining permission from concerned authority and payment of advance Royalty.
13. **Water requirement and wastewater management:** Total water requirement for the project will be 28 KLD, out of which 17 KLD will be required for drinking and domestic purpose, 10 KLD for dust suppression and 1 KLD for plantation purpose. Water requirement will be met from nearby available water resource and drinking water will be sourced from tanker.
14. **Baseline Study conducted** – Baseline study of the study area was conducted during Pre-monsoon from 1st March 2021 to 31st May 2021.
- **Air:** The concentrations of PM 10 and PM 2.5 for all the 8 AAQM stations were found between 57.6 to 87.9 $\mu\text{g}/\text{m}^3$ and 23 to 35.2 $\mu\text{g}/\text{m}^3$ respectively. The concentrations of SO₂ and NO_x were found to be in range of 8.2 to 12.6 $\mu\text{g}/\text{m}^3$ and 14 to 21.6 $\mu\text{g}/\text{m}^3$ respectively.
 - **Noise:** The noise levels varied in the study area during day time from 71.2 dB(A) Leq to 49.4 Leq dB(A). The night time noise level in the study area is in the range of 66.5 dB (A) Leq to 39.2 Leq dB (A).
 - **Ground water monitoring:** The ground water analysis for all the 8 sampling stations. All the samples meet the desirable standards (pH ranges from 6.87 to 7.76). TDS in samples ranges from 700 mg/L to 850 mg/L. All the samples meet the permissible limit of 2000 mg/L. Total Hardness in the water ranges from 305 mg/L to 420 mg/L. All the samples meet the permissible limit of 600 mg/L. Calcium content in the water ranges from 74.4 mg/L to 102.4 mg/L, all the samples meet the permissible limit of 200 mg/L. Magnesium content in the water ranges from 25.7 mg/L to 42.2 mg/L. All the samples meet the permissible limit of 100 mg/L.
 - **Surface water monitoring:** The surface water analysis for all the 8 sampling stations. All samples were colorless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 6.95-7.48). TDS in samples ranges from 213 mg/L to 347 mg/L. Total hardness in the water ranges from 125 mg/L to 158 mg/L. Calcium content in the water ranges from 84 mg/L to 112 mg/L. Magnesium content in the water ranges from 24 mg/L to 58 mg/L.
 - **Soil monitoring:** Organic Matter ranges from 0.41% to 1.51 % in the soil samples. Nitrogen is found to be in moderate amount as it ranges from 210 mg/kg to 1284 mg/kg

and Phosphorous in less amount i.e. from 32 mg/kg to 640 mg/kg, whereas the Potassium is found to be ranging from 228 mg/kg to 450 mg/kg.

15. Greenbelt:

Plan Period	Location	Area (Ha.)	No of saplings	Remarks
1 st year	Peripheral Safety Zone of Cluster-1A	0.54	250	Plantation will be undertaken by individual lessees of the cluster in the supervision of District administration.
2 nd year	Peripheral Safety Zone of Cluster-1A	0.54	250	
3 rd year	Peripheral Safety Zone of Cluster-1A	0.54	250	
4 th year	Peripheral Safety Zone of Cluster-1A	0.54	250	
5 th year	Peripheral Safety Zone of Cluster-1A	0.54	250	
Total		2.7	2500	

16. Solid Waste Management: The waste generated from mines shall be dumped in the proposed area earmarked in the plan. The materials shall be transported to the dumping site by tippers. The dump shall be built in one terrace covering a height about 3 meters in total over an area of 0.701 hectares in the first five years. It will be built by advancing method. The ultimate dump slope will be maintained at 45° towards the garland drain outside the periphery of the dump followed by settling tanks to avoid wash offs. Moreover, dump slopes will also be utilized for plantation in order to prevent damage to the dumps by the surface run-off (rain) water. During the plan period over 0.669 ha of land in the north-eastern side of the M.L area is proposed for waste dump which will be stabilized, with plantation. Surface run-off water flowing from the dump will be allowed to filter through retaining wall and released water will pass through garland drain and settling tank. Quarry water will be canalized through peripheral drain and settling tank to release clean water.

17. Manpower requirement: A total of 570 workers will be employed in the proposed mine.

Designation	Number
Mine Manager / Mine permit Manager/ Officials	15
Skilled Labor	100
Semi-skilled	155
Unskilled	300
Total	570

18. Project cost: The approximate cost of the project comes around ₹1.50 crore, Capital Cost- ₹ 27,30,000, Recurring Cost- ₹12,77,000 per annum.

Particulars	Capital Cost	Recurring Cost per year
Pollution Control		
Dust Suppression by water sprinkler	-	1,00,000
Pollution Monitoring (Air, Noise, soil and water)	-	1,80,000 (Air, Noise, soil and water Quarterly)
Greenbelt & Afforestation along Approach road	4,50,000	2,17,500

Occupational health and safety	2,75,000	80,000
PPE for workers	3,50,000	1,25,000
Maintenance of roads	1,55,000	75,000
CSR activity as per required in public hearing	15,00,000	5,00,000
Total	27,30,000	12,77,000

19. **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 / documents furnished by the proponent and presentation made by the consultant **M/s Green Circle Inc. Vadodara**, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent:

- a) The PP shall submit the precautionary measures to be adopted for control of ground vibration and fly rocks.
- b) Submit the detailed report of total no. of quarries in the proposed cluster duly certified from competent authority with supporting documents. Previous EC details of all quarries.
- c) Furnish a copy of DSR as proof of the numbers of quarries.
- d) The proponent shall follow proper guidelines during blasting and preventive measures to be taken to avoid cracks in houses of nearest habitation.
- e) Since some of the quarries are filled with water, the PP shall explore the possibility of utilization of the rain water stored in existing quarries to meet the water demand. Additionally, the PP may plan to use one or more quarries to store the surface runoff during monsoon and use this water to meet the water demand instead of depending upon the nearby ponds.
- f) Submit the EMP budget individually for each mine present in the cluster.
- g) Distance of the nearest habitation from the ML area boundaries of each of the mines in the cluster to be given.
- h) Permission for usage of Surface water to be taken from concerned authority.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BAITARANI RIVER SAND BED, GOUDADIHA OVER AN AREA OF 12.50 ACRES OR 5.058 HA HAVING KHATA NO. 217, PLOT NO. 1/1 IN VILLAGE GOUDADIHA UNDER ANANDAPUR TAHASIL OF KEONJHAR DISTRICT OF SRI SUBASH CHANDRA ROUT - EC

1. This proposal is for Environmental Clearance for Baitarani River Sand Bed, Goudadiha over an area of 12.50 Acres or 5.058 Ha having Khata No. 217, Plot No. 1/1 in village Goudadiha under Anandapur Tahasil of Keonjhar District of Sri Subash Chandra Rout.
2. **Category:** As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Category B in Schedule in item 1(a)- Mining of Minerals.
3. The Quarry lease is granted in the name of Sri Subash Chandra Rout, S/o-Shri Kailash Rout for a lease period of 5 (five) years.

4. The Mining plan has been approved for a period of five years by the Joint Director of Geology, Keonjhar. Vide letter no – 707.Dt dated 28/04/2021 in favour of Tahsildar, Anandapur.
5. **TOR details:** Terms of Reference (ToR) was issued by SEIAA, Odisha vide Letter no. - 3671/SEIAA, on dated 27/12/2021.
6. **Public hearing details:** Public hearing was conducted on 03.10.2023 at 10.30 AM at Village Goudadiha under Anandpur Tahasil of Keonjhar District, Odisha. Environment Protection measures was the main issue in Public Hearing, funds has been merged with environment management plan as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 issued by MoEF&CC
7. **Location and connectivity:** The mine lease area is located at Khata No -217, Plot No-1/1 in Village-Goudadiha, Tahasil-Anandapur and District-Keonjhar. The Kisam of the site is Nadi. It is bounded by Latitude: N21°17'14.9"to N21°17'27.8" & Longitude: E86°05'0.8"to E86°05'8.2" bearing Topo-Sheet no. F45O3 of Survey Map of India. The nearest village is Goudadiha about 1 km, E, Nearest Town/City-Anandapur about 9.74 km, Nearest Railway Station-Sagadapata Railway Station 19 Km, W, Nearest Airport-Biju Patnaik International Airport, Bhubaneswar about 119 km, S, Nearest Highway-SH- 53 is 1.0 km, Nearest NH-NH- 215 is 0.6 km, W. There is no Ecology Sensitive Zone/ national parks and sanctuary within 10 km radius. The nearest Reserve Forest is Satkosia Reserve Forest about 4 km, ENE. It falls under Sismic Zone– II as per IS: 1893 (Part-I): 2002. Nearest distance of Approach Road-0.6km, Nearest water body-Baitarani River, Nearest Habitation-Goudadiha about 1.0km.
8. **Total Reserves and Proposed Production:** As per MGQ certificate given by Competent Authority the proposed production is 21,445cum/Year.

As per Approved Mining Plan		As per Approved Mining Plan
Geological Reserve	Mineable Reserve	Production
1,26,450cum	1,07,225cum	21,445cum/Year

9. **Replenishment study details:** The Study was carried out for pre-monsoon data on 13.06.2023 and post monsoon data on 28.11.2023 by using UAV/ Drone method as per the SSMG, 2020. Average thickness during Pre-monsoon period measured from contour value of 562 numbers of grid points-58.84731317m & average thickness during Post-monsoon period is 59.34761566m. Deposit of sand thickness is 59.34761566m -58.84731317m=0.500302491 or says 0.5m. As, per the calculation, 10978.8215 m³ sand has been replenished.
10. **Baseline study details:** Baseline study of the study area was conducted during winter season from 1st October 2021 to 31 December 2021 for Baitarani River Sand Quarry, Goudadiha..
 - a) **Air quality:** The AAQ analysis indicates that the concentration of PM₁₀ varied from 61.2 to 86.5 µg/m³, PM_{2.5} from 18.6 to 27.7 µg/m³, SO₂ from 6.9 to 10.3 µg/m³, NOx from 10.4 to 15.4 µg/m³.
 - b) **Surface water quality:** All samples were colourless meeting desirable norms. All samples meet the desirable standards (pH ranges from 6.98-7.86). TDS in samples ranges from 29

mg/l to 98mg/l. All the samples meet the permissible limit of 2000 mg/l. Total hardness in the water ranges from 16 mg/l to 57 mg/l. All the samples meet the permissible limit of 600mg/l. Calcium content in the water ranges from 3.28 mg/l to 16.38 mg/l, all the samples meet the permissible limit of 200 mg/l. Magnesium content in the water ranges from 1.4 mg/l to 3.97mg/l, all the samples meet the permissible limit of 100 mg/l.

- c) **Ground water quality:** The ground water analysis for all the 7 sampling stations shows that pH varied from 6.72 to 7.28, total hardness varied from 159 mg/l to 269 mg/l & total dissolved solids varied from 101mg/l to 244 mg/l. The water samples contain chloride 9.14 mg/l to 28.93 mg/l, Ca from 21.47mg/l to 40.28mg/l, Magnesium varies from 1.92 mg/l to 6.89 mg/l.
- d) **Noise study:** Noise level varies from 51.2 dB (A) Leq to 63.5 Leq dB (A) during Day time and 32.8 dB (A) Leq to 42.9 Leq dB (A) during Night time, which are below the prescribed limits of CPCB.
- e) **Soil quality:** All soil samples indicate pH value ranging from 6.92.-7.25. Organic Matter ranges found BDL in the soil samples. Nitrogen is found BDL and Phosphorous in less amount i.e. from 0.14 mg/kg- 0.62 mg/kg, whereas the Potassium is found to be ranging from 150 mg/kg -299 mg/kg.

- 11. **Mining method:** The mining of sand will be done by open cast manual method for excavation. The maximum capacity is 21,445 m³/year.
- 12. **Water requirement:** Total water approx, 25 KLD will be required for different purposes like Domestic, Dust suppression, plantation purposes & sourced as per the availability.
- 13. **Greenbelt development:** Plantation of 50 trees/year will be carried out for the proposed project.
- 14. **Manpower requirement:** Total 36 nos of manpower will be required for the proposed project.
- 15. **Project cost:** Total cost of the proposed project is ₹1 crore. A capital cost of ₹2,50,000 is proposed as EMP cost & ₹1,30,000 as EMP recurring cost.
- 16. **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** with the project proponent, the SEAC decided to take decision after receipt of the following from the proponent.

- a) Submit the RL of the riverbank and RL of the surface of the river water.
- b) Submit the errors in the measurement of geolocation points (Latitude / Esting (X), Longitude / Nothing (Y) & azimuth / elevation (Z)) in the pre and post monsoon drone surveys mentioned in the Replenishment Study Report.
- c) The safe workable area mentioned in the submitted replenishment study report were found to be different from the mineable area stated in the approved mining plan. The RL of the riverbed sand surface in the ML area were also found to be different from that mentioned in the

approved mining plan. The project proponent is required to submit the revised approved mining plan after reconciling the above-mentioned discrepancies.

- d) Submit an explanation regarding the discrepancy in the highest level of elevation as shown in the replenishment level calculation table (Pre and post monsoon geolocation surface RLs of the riverbed sand in the ML area) of the replenishment study report.

CONSIDERATION OF OLD PROPOSAL (ADS RECEIVED):

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. NATIONAL ENTERPRISES FOR ENHANCEMENT OF IRON ORE PRODUCTION FROM 0.5 MTPA TO 1MTPA ALONG WITH 180 TPH BENEFICIATION PLANTS OF RAIKELA IRON ORE MINES OVER 45.932 HECTARE AT. VILLAGE RAIKELA, TEHSIL - KOIDA, DIST- SUNDARGARH OF SRI CHARANJIT SINGH GREWAL – TOR.

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for Environmental Clearance of M/s. National Enterprises for enhancement of iron ore production from 0.5 MTPA to 1MTPA along with 180 TPH beneficiation plants of Raikela Iron ore mines over 45.932 hectare at. Village Raikela, Tehsil - Koida, Dist- Sundargarh of Sri Charanjit Singh Grewal.
3. **Category:** This project falls under Category "B" Project or Activity 1(a)-Mining of Minerals projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
4. **Project details:** The ToR was granted for enhancement of production from 0.5 MTPA to 1.0 MTPA vide letter no 8603/SEIAA dated 16.07.2020 from SEIAA, Odisha. Subsequently, the Public Hearing has been conducted successfully on dated 22.10.2021. Later the Project Proponent intended to modify with setting up a 180 TPH Beneficiation Plant. Subsequently the PP has applied for fresh ToR vide proposal No SIA/OR/MIN/436689/2023 15.07.2023.
5. Sri Charanjit Singh Grewal is the proprietor of the firm vide letter no MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020. The Lease deed was executed on 21.12.1983 & valid up to 20.12.2033.
6. **List of Statutory clearances obtained earlier:**

Forest Clearance	FC letter no. 8-128/1997-FC, dated 10.11.2005. Further on 17.07.2013, as per circular of MoEF, the lessee has submitted application for diversion of 6.559 ha of safety zone area.
Environment Clearance	EC letter no. SEIAA/1957, dated 08.09.2016 for production of 0.5million TPA of iron ore
CTE from SPCB	Obtained, vide letter no. 3025/IND-II-NOC-5567, dated 22.02.2012
CTO from SPCB	Obtained, vide letter no. 8819/IND-I-CON-2272, dated 31.05.2023
MP approval	IBM approved for the period 2018-19 to 2022-23 vide letter no. MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020.

7. **Status of Forest Clearance:** Proposal No. FP/OR/MIN/427/1997, file No. 8-128/1997-FC, Area inverted- 37.317 ha dated 10/11/2005, Stage- II clearance accorded.
8. Approval letter of mining plan was obtained vide letter no MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020.
9. **Location and Connectivity** – The proposed site is located at Plot No.6/P, 7/P, 8/P, 513/P, 589/P, 516/P, 517/P, 518/P, 519/P, 520/P, 585/P, 586/P, 782/P at Village Raikela, Tehsil - Koida, Dist.-Sundargarh, Odisha bounded by Geo Coordinates: Latitude -21°52' 46.70"N to 21° 53'06.40"N and Longitude-85°10' 58.98"E to 85° 11'25.69"E featured in Topo Sheet No. 73 G/1. Nearest railway station is Barsuan railway station - 18 km (SW); Nearest Road is Tensa - Koira Rd. 3.0 km NH 520-7km; Nearest Airport is Jharsuguda Airport- 170 km and Nearest town is Koira town - 11 km (North-east). Nearest sanctuary is Hadagarh WLS 133 km away, National Park Similipal is 95 km., Karo River is 6 km, Sarkunda Nala is 7.5 km & Kuradhi Nadi 8 km away.
10. **Comparative table for Previous EC and proposed enhanced production for which TOR applied for:**

Previous EC Capacity	Facilities (Existing)	Present applied for	Facilities (Proposed)	Final Capacity	Final Facility
0.5 MTPA ROM	2X150 TPH Crusher & 2X150 TPH Screening	1 MTPA (Additional 0.5MTPA ROM)	180TPH Beneficiation plant	1.0 MTPA ROM	2X150 TPH Crusher, 2X150 TPH Screening & 180 TPH Beneficiation Plant

11. **Summary of products generated by the project:**

Units	Products and By products	Existing	Additional	After Expansion
MTPA	Iron Ore	0.5	0.5	1.0

12. **Method of Mining:** The proposed method of mining is Open Cast fully mechanized method. Bench dimension is 6m height & 10 m width. Water table of the region is at 520m AMSL and during post monsoon it goes up to 523m AMSL. The depth of hole in this mine will be 10% more i.e. up to 6.5m. Power gel will be used for blasting with the help of detonators and safety fuse /NONEL. Blasting pattern will be staggered (V type) with delay interval of 25ms, Power factor has been assumed to be 6t/kg.

Sl. No.	HEMM with Capacity	Nos.
i)	Excavator-0.9 cum	05
ii)	Excavator-1.4 cum	03
iii)	Pay Loader- 1.9cum	05
iv)	Rock drill- 100mmdia	01
v)	Tipper-25t	09
vi)	Mobile Crushing unit - 150TPH	02

vii)	Mobile Screening unit-150 TPH	02
viii)	Beneficiation Plant 180 TPH	01

13. Number of topsoil dumps with area and capacity, no of waste/reject dump:

Period	Generation	No of Dump	Area	Capacity
Existing	Nil	1	1.96	1469100cu m
Plan Period	355264cu m	No additional Dump, Dumping - 289670 cum Back-filling- 65594cum	Back filling- 0.64Ha Dumping -No additional area	355264cu m
Conceptual Period	949122cu m	Dumping over Dump-A - 281000CUM	0.54ha additional area	949122cu m
		Back-filling - 668122 cum	6.68Ha	

14. Area under excavation is 19.420 ha in plan period, during conceptual period is 21.420 ha. Total mined out area will be 26.475, backfilled area of 6.68 ha.

15. Details of crushers /screen/beneficiation plant:

Facility	Existing in TPH	Proposed	Final in TPH
Crushing Plant	2x150	Nil	2x150
Screening Plant	2x150	Nil	2x150
beneficiation plant	Nil	180	180

16. **Water Requirement:** The total water requirement shall be 203 KLD, total fresh make up water shall be 81.5KLD & recycled water shall be 116.5 KLD (Settling tank, ETP & STP) which will be sourced from Karo river by with due permission.

Sl. No	Type of unit	Water in KLD	Recycled ETP, STP & Settling Tank	Makeup
i)	Process	180	108	72
ii)	Dust suppression & Dry Fog System	5	5	0
iii)	Drinking/Washing	7	4	7
iv)	Workshop	5	3	1
v)	Wheel Wash	3	1.5	1.5
vi)	Greenbelt development	3	4	
		203	116.5	81.5

17. Green Belt:

Plan Period	Area in Ha	No of Plants
Safety Zone	1.2	2560

Dump Slope	0.9	1350
Untouched	0.5	750
Conceptual Period		
Back Filled	5.42	13550
Bench	21.075	52687.5
Terrace	2.5	6250
Road	0.78	1950
Mineral Stack	4	10000
Screening	2.428	6070

18. Land use as per mining at the end of plan period and at conceptual stage

Particulars	As at present in ha.)	Land use after 2022-23 (in ha)	At the end of conceptual period (in ha)
Area under excavation	19.42	18.992	24.047
Overburden dump site	1.96	2.81	2.5
Mineral storage	3.992	4	Nil
Infrastructure & Mine camp	0.28	0.28	Nil
Road	0.75	0.78	Nil
Green belt including safety zone	1.7	1.8	3.065
Beneficiation Plant	0	2.428	2.428
Other (Settling Pond, Magazine & Beneficiation Plant)	1.07	1.26	Nil
Sub-Total	29.172	32.35	32.04
Untouched area	3.195	0.017	0.327
Overlapping area	13.565	13.565	13.565
Total	45.932	45.932	45.932

19. **Details of Waste Generation:** During the plan period, waste generation will be 355264m³ and conceptually 949122m³. Waste from beneficiation (i.e. tailings) will be 875000m³.

20. Mitigation of waste produced:

Period	Generation	No of Dump	Area	Mitigation
Existing		1	1.96	Dumping and stabilization with protection wall & Plantation
Plan Period	355264cum	No additional Dump, Dumping - 289670 cum Back-filling-65594cum	Back filling-0.64Ha Dumping -No additional area	Dumping & Back Filling, stabilization with Plantation

Conceptual Period	949122cum	Dumping over Dump-A - 281000CUM	0.54ha additional area	Dumping & Back Filling, stabilization with Plantation
		Back-filling - 668122 cum	6.68Ha	
		Tailings from Beneficiation Plant 629856 cum		Will be dry pressed and back filling

21. **Baseline study details:** Base line study has been carried out in the period of December 2019 – February 2020.
22. **Power Requirement & Solar Power details:** About 600 KVA power will be required and 30 KVA from solar energy is proposed for the project.
23. **Rainwater harvesting details:** Two Settling ponds of 20m length X 20m width X 3m depth and 20m length X 15m width X 9m depth are already constructed, about 5 KLD during lean season.
24. **Total Employment:** After enhancement of production and beneficiation plant the total employment will be 109 persons
25. **Project cost:** Estimated cost of the proposed project is 33.4 Cr.
26. **Environment Consultant:** The Environment consultant **M/s Global Tech Enviro Experts Pvt. Ltd.** along with the proponent made a presentation on the proposal before the Committee. The project proponent requested for exemption of fresh public hearing for the revised proposal.
27. The SEAC in its meeting held on dated 18-10-2023 recommended the following:
- a) **The proponent may be asked to submit the following for further processing of EC application:**
- Justification as to why a fresh public hearing will not be conducted for revised proposal. Documents in support of exemption of public hearing wherein the Ministry has allowed the projects under similar cases exempting the public hearing process.
 - Copy of approved mining plan and lease document for reduced lease area.
- b) **Following specific ToRs may be prescribed while issue of Terms of References.**
- Specify the area under mining, safety zone, Common boundary and where exactly the proponent has proposed to take up the expansion activity. Accordingly, the proponent shall submit the layout.
 - Calculate and furnish greenbelt development in percentage (%) coverage over the ML area.
 - A layout demarking the tailing pond & rejects dumping area.
 - In case of Dry stacking of tailings, the proponent shall furnish details of management practices including moisture content of tailing cakes, height and slope of the tailing dumps.
 - Detailed Material balance of different grades of Fe and other elemental analysis of the materials.

- vi) Permission from the competent Authorities for drawl of Ground water/ Surface water.
- vii) Copy of wildlife conservation plan duly approved by competent authority in Forest Department.
- viii) Copy of traffic study report duly vetted by an institute of repute.
- ix) Details regarding parking plaza and open space available for movement of vehicles.
- x) Compliance status report of NEERI guidelines.
- xi) Detailed note on water balance, material balance, P₂O₅ and sulphur generation and management.
- xii) Stacking arrangement details along with water content, slope and pattern.
- xiii) Detailed notes/process flow chart of equipment and machineries deployed.
- xiv) During Iron ore production, crushing, screening lots of dust will be generated. Proponent has suggested 5 KLD water to be used for dust suppression and dry fog system. Water requirement may be much higher than 5 KLD.

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

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i.	Justification as to why a fresh public hearing will not be conducted for revised proposal. Documents in support of exemption of public hearing wherein the Ministry has allowed the projects under similar cases exempting the public hearing process.	We have enclosed a letter of request to exempt fresh Public hearing as public hearing has been conducted for the same project for same capacity for which environmental clearance has not been obtained. Examples of similar type of proposals had been submitted for reference.	---
ii.	Copy of approved mining plan and lease document for reduced lease area.	The approved mining plan with approved surface plan is enclosed.	Approved Mining plan is for 45.932Ha. Reason has been mentioned.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Global Tech Enviro Experts Pvt. Ltd.**, the SEAC recommended the following:

- a) Conducting fresh public hearing may be exempted as public hearing has already been conducted for the mining project for the same capacity. However, a public consultation may be carried out for obtaining views of the public by giving one month time in newspapers.
- b) Additional ToRs prescribed as per **Annexure – A** for conducting detailed EIA study for 180 TPH Iron Ore Beneficiation Plant with following specific ToRs:

- i) The PP needs to submit the Material and water balance of Iron ore with Fe and recovery of water from process for recycling during EC presentation.
- ii) Specify the area under mining, safety zone, Common boundary and where exactly the proponent has proposed to take up the expansion activity. Accordingly, the proponent shall submit the layout.
- iii) Calculate and furnish greenbelt development in percentage (%) coverage over the ML area.
- iv) A layout demarking the tailing pond & rejects dumping area.
- v) In case of Dry stacking of tailings, the proponent shall furnish details of management practices including moisture content of tailing cakes, height and slope of the tailing dumps.
- vi) Detailed Material balance of different grades of Fe and other elemental analysis of the materials.
- vii) Permission from the competent Authorities for drawl of Ground water/ Surface water.
- viii) Copy of wildlife conservation plan duly approved by competent authority in Forest Department.
- ix) Copy of traffic study report duly vetted by an institute of repute.
- x) Details regarding parking plaza and open space available for movement of vehicles.
- xi) Compliance status report of NEERI guidelines.
- xii) Detailed note on water balance, material balance, P_2O_5 and sulphur generation and management.
- xiii) Stacking arrangement details along with water content, slope and pattern.
- xiv) Detailed notes/process flow chart of equipment and machineries deployed.
- xv) During Iron ore production, crushing, screening lots of dust will be generated. Proponent has suggested 5 KLD water to be used for dust suppression and dry fog system. Water requirement may be much higher than 5 KLD.


MEMBER SECRETARY, SEAC

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT OF M/S NATIONAL ENTERPRISES FOR ENHANCEMENT OF IRON ORE PRODUCTION FROM 0.5 MTPA TO 1MTPA ALONG WITH 180 TPH BENEFICIATION PLANTS OF RAIKELA IRON ORE MINES OVER 45.932 HECTARE AT. VILLAGE RAIKELA, TEHSIL - KOIDA, DIST- SUNDARGARH OF SRI CHARANJIT SINGH GREWAL - TOR

1. The alternate sites considered, the relative merits and demerits and the reasons for selecting the proposed site for the Beneficiation Plant should be indicated.
2. Details of the technology and process involved for beneficiation should be given.
3. Location of the proposed Plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant should be justified.
4. Treatment of run of mine (ROM) and or of the fines/waste dump should be spelt out.
5. Estimation of the fines going into the washings should be made and its management described.
6. Details of the equipment, settling pond etc. should be furnished.
7. Detailed material balance should be provided.
8. Sources of raw material and its transportation should be indicated. Steps proposed to be taken to protect the ore from getting air borne should be brought out.
9. Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.
10. The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should also be indicated.
11. A copy of the document in support of the fact that the Proponent is the rightful lessee of the unit should be given.
12. All documents including EIA and public hearing should be compatible with one another in terms of the production levels, waste generation and its management and technology and should be in the name of the lessee.
13. All corner coordinates of the Unit, superimposed on a High Resolution Imagery/Toposheet should be provided. Such an Imagery of the proposed Unit should clearly show the land use and other ecological features of the study area (core and buffer zone).
14. Issues relating to Safety should be detailed. The proposed safeguard measures in each case should also be provided. Disaster management plan shall be prepared and included in the EIA/EMP Report.
15. The study area will comprise of 10 km zone around the Plant.

JNajak
Environmental Scientist, SEAC

16. Cumulative impact study of both Beneficiation Plant with suggested mitigation measures as per the study should be described.
17. Option to provide only silo for storage of minerals instead of open stacking to avoid fugitive dust should be explored and arrangements finalized justified.
18. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
19. Details of the land for any Over Burden Dumps outside the lease, such as extent of land area, distance from lease, its land use, R&R issues, if any, should be given.
20. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the Project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
21. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
22. A study shall be got done to ascertain the impact of the Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.
23. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
24. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

25. Proximity to Areas declared as 'Critically Polluted' shall also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB/CPCB shall be secured and furnished to the effect that the proposed activities could be considered.
26. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects, should be discussed in the report.
27. One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the unit in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
28. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
29. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
30. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be secured and copy furnished. .
31. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
32. Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.

J. Nayak
Environmental Scientist, SEAC

33. Details of any stream, seasonal or otherwise, passing through the project area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
34. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to the pollution.
35. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
36. Details of the onsite shelter and facilities to be provided to the workers should be included in the EIA report.
37. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area should be detailed.
38. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
39. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
40. Public hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
41. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
42. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
43. A brief background of the Project, its financial position, Group Companies and legal issues etc. should be provided with past and current important litigations if any.
44. Benefits of the Project, if the project is implemented should be outlined. The benefits of the projects shall clearly indicate environmental, social, economic, employment potential, etc.

45. Besides the above, the below mentioned general points are also to be followed:-
- (a) Executive Summary of the EIA/EMP Report
 - (b) All documents to be properly referenced with index and continuous page numbering.
 - (c) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - (d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.
 - (e) Where the documents provided are in a language other than English, an English translation should be provided.
 - (f) The Questionnaire for environmental appraisal of project as devised earlier by the Ministry shall also be filled and submitted.
 - (g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should also be followed.
 - (h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered.
 - (i) Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified Report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
46. The prescribed ToR would be valid for a period of four years for submission of the EIA/EMP report.