

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 03<sup>RD</sup> MAY 2023**

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The SEAC met on 03<sup>rd</sup> May 2023 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.

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|------------------------------|---|-----------------------|
| 1. Sri Sashi Paul            | - | Chairman (through VC) |
| 2. Dr. K. Murugesan          | - | Member Secretary      |
| 3. Dr. Chittaranjan Panda    | - | Member                |
| 4. Prof. (Dr.) H.B. Sahu     | - | Member                |
| 5. Er. Fakir Mohan Panigrahi | - | Member (through VC)   |
| 6. Prof. (Dr.) B.K. Satpathy | - | Member                |
| 7. Dr. K.C.S Panigrahi       | - | Member (through VC)   |
| 8. Prof. (Dr.) Abanti Sahoo  | - | Member (through VC)   |
| 9. Dr. Ashok Kumar Sahu      | - | Member                |
| 10. Dr. Rabi Narayan Patra   | - | 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 D.N. HOMES PVT. LTD. FOR RESIDENTIAL APARTMENTS PROJECT AT PLOT NO. 7254 (P), 7255(P), & 7640(P) OF HAL KHATA NO- 4689, OVER A BUILT - UP AREA 143723.71SQM. LOCATED AT MOUZA-GADAKANA, TAHASIL- BHUBANESWAR, DISTRICT- KHURDA OF SRI RATNAMALA SWAIN - EC**

1. This proposal is for Environmental Clearance of M/s D.N. Homes Pvt. Ltd. for Residential Apartments Project at Plot No. 7254 (P), 7255(P), & 7640(P) of Hal Khata no- 4689 over a built-up area 143723.71sqm. located at Mouza- Gadakana, Tahasil- Bhubaneswar, District - Khurda of Sri Ratnamala Swain.
2. **Category:** The project falls under category "B" or activity 8 (a)-Building & Construction Project under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s D.N. Homes Pvt. Ltd. proposes a Residential Apartment Project at Bhubaneswar, Odisha. The project site is located at Plot No. 7254 (P), 7255(P), & 7640(P) of Hal Khata no. - 4689 of Mouza - Gadakana, Tahasil- Bhubaneswar, District- Khurda, Odisha. The total plot area is 12,144.52 sqm. and total construction (Built-up) area is 1,43,723.71 sqm. The project will comprise of three numbers of Buildings. Maximum height of the building is 134.8 m.
4. The project comprises of following facilities: Residential Dwelling Units (414 nos.), Community Facilities and Swimming Pool.
5. **Location and connectivity:** The project site is located at Plot No. 7254 (P), 7255(P), & 7640(P) of Hal Khata no. - 4689 of Mouza- Gadakana, District- Khurda, Odisha. The geographical co-

ordinates of project site are 20°18'57.32"N and 85°49'42.42"E. The Nearest Highway is NH-16 which is 2km in South direction from the project site, NH316 is 4.6km towards ESE direction, SH-60 is 9.8km towards East direction, & MCL Road site connecting road is adjacent to the project site in west direction. The nearest Railway Station is Gopalpur Mancheswar Railway Station is about 1.8 km (ENE) away from the project site. Biju Patnaik International Airport is at 6.5 km (S) from project site. The site falls under the zone III as per the Seismic Zone Map of India and is thus prone to Moderate damage risk zone.

#### 6. Statutory Clearances applied/Obtained -

7. BDA approval for the proposed project is issued vide letter no 3226 dated 25.01.2023.
8. NOC for water supply and sewerage connection to the proposed project is issued by public health division, Bhubaneswar vide letter no 3530 dated 17.02.2023.
9. Fire safety recommendation has been issued vide Recommendation No RECOMM1204130052023001120 dated 17-03-2023.
10. All other Statutory Clearances has been applied i.e., NOC from DFO, Bhubaneswar vide reference no DNH/GP/117/2023 dated 16.01.2023; permission for disposal of storm water and surplus treated water to the nearby drain vide reference no DNH/GP/118/2023 dated 17.01.2023.
11. **Land use details:** The total land area is 12,144.52m<sup>2</sup> (3.001 acres) and the total proposed built-up area is 1,43,723.71m<sup>2</sup>. There are three towers i.e., Wing A = 4BHK +MAID (Type 1 & 2), Wing B (4BHK +STUDY) (3BHK +STUDY) and Wing C = (4BHK) (3BHK + STUDY).

**Table of area statement**

S. No.	Description	Area (m <sup>2</sup> )
a)	Plot area	12,144.52
b)	Permissible Ground Coverage (@40% of plot area)	4857.8
c)	Proposed Ground Coverage (@ 33.82% of plot area)	4,107.5
d)	Permissible FAR (@6 of plot area)	72,867.12
e)	Total Proposed FAR (@5.99 of plot area)	72,861.93
f)	<b>Non-FAR Area</b>	<b>70,861.78</b>
	Superstructure Non-FAR Area	40,710.66
	Basement Area	30,151.12
g)	<b>Total Built-up area (5+6)</b>	<b>1,43,723.71</b>
h)	Required Parking Area as per bye laws (@30% of FAR area)	21,858.58
i)	Proposed Parking Area (@37.30% of FAR area)	27,176.51
j)	Proposed Green Area (@33.01% of the plot area)	4,008.90 [which includes 22% area (2671.80 sqm) for Green belt & 11.01 %

S. No.	Description	Area (m <sup>2</sup> )
		area (1337.11sqm) for lawn]
k)	Height of the tallest building (m)	134.8
l)	Total Population	3178

12. **Water requirement:** During operational phase, total water requirement of the project is expected to be 401 KLD (255 KLD of fresh water and 146 KLD Recycled Water) as per the below table. Freshwater requirement will be met by ground water/bore wells.

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	<b>Domestic Water</b>						
	• Residents	2764	90	45	248.76	124.38	<b>373.14</b>
	• Staff	138	25	20	3.45	2.76	<b>6.21</b>
	• Visitors	276	5	10	1.38	2.76	<b>4.14</b>
					<b>254 KLD</b>	<b>130 KLD</b>	<b>384 KLD</b>
<b>Total Domestic Water = 384 KLD</b>							
B.	<b>Swimming Pool</b>				<b>1 KLD</b>		
C.	<b>Horticulture</b>	4008.9m <sup>2</sup>	4 l/sqm		<b>16 KLD</b>		
<b>Grand Total (A+B+C) = 401 KLD</b>							

13. **Waste water generation & Management:** Estimated Wastewater generation is 334 KLD and the same will be treated in STP of 400 KLD capacity. 146 KLD of treated wastewater will be recycled and reused for flushing and horticulture. Surplus water of 115 KLD will be discharged to external sewers.

<b>Domestic Water Requirement</b>	<b>384 KLD</b>
• Fresh	254 KLD
• Flushing	130 KLD
<b>Waste water [@80% fresh + 100% flushing]</b>	<b>204 + 130= 334 KLD</b>
STP Capacity (20 % higher than waste water)	400 KLD

14. **Rainwater harvesting details:** Rainwater harvesting has been catered to and designed as per the guidelines of CGWA. Peak hourly rainfall has been considered as 160 mm/hr. The recharge pit of 4 m diameter and 4m depth is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. The bottom of the recharge structure will be kept 5 m above this level. At the bottom of the recharge well, a filter media is provided to avoid choking of the recharge bore. Total of 10 rainwater harvesting pits are proposed for artificial ground water recharge. Taking the effective dia and depth of a Recharge pit 4 m and 4 m respectively, Volume of a single Recharge pit =  $\pi r^2 h = 3.14 \times 2 \times 2 \times 4 = 50.24 \text{ m}^3$

15. **Power requirement:** The power supply will be through TP Central Odisha Distribution Limited (TPCODL). The total maximum demand is estimated as 3861 kVA. There is provision of 4 nos. of DG sets of total 4800 kVA (4 X 1200 kVA) capacity for power back up. Solar based lighting is

proposed in the landscape area, signage, entry gates and boundary walls etc., and LED lighting to save about 10% of total power requirement.

16. **Parking Proposed:** Total area proposed for parking is 850 ECS / 27,176.51 m<sup>2</sup> [848 ECS (3 Basement parking - 27,140.51 m<sup>2</sup>)+ 2 ECS (Surface parking - 36 m<sup>2</sup>)].

17. **Solid waste generation:** About 1504 kg/day solid wastes will be generated in the project. The biodegradable waste 601.6 kg/day will be processed in OWC and the non-biodegradable waste generated 902.4 kg/day will be handed over to authorized local vendors. Horticultural waste and STP sludge would be used as manure. Spent oil from DG sets will be disposed-off through approved recyclers.

S. No.	Description	Occupancy	Waste Generated (kg/capita/day)	Waste Generated (kg/day)
1.	<b>Domestic Solid Waste</b>			
	• Residents	2,764	0.5	1382
	• Staff (Maintenance, Club house, Departmental Store)	138	0.25	35
	• Visitors (Maintenance, Club house, Departmental Store)	276	0.15	41
2.	Horticultural Waste (0.99 acre)		@ 0.2 kg/acre/day	0.198
3.	STP Sludge		Wastewater x 0.35 x B.O.D difference/1000	45.59
<b>Total Solid Waste = 1504 kg/day</b>				

18. **Greenbelt:** Total green area measures 4,008.9 m<sup>2</sup> i.e., 33.01% of the plot area which will include Plantation area of 2,671.8 m<sup>2</sup> (22%) + Lawn area of 1,337.11m<sup>2</sup> (11.01%). Evergreen tall and ornamental trees have been proposed to be planted inside the premises. No. of trees required is 50 Nos. The plantation matrix adopted for the green belt development includes pit of 0.3 m x 0.3 m size with a spacing of 2 m x 2 m. Peripheral plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt. Proposed Trees include *Anogeissus latifolia*, *Azadirachta indica*, *Dalbergia sissoo*, *Lagerstroemia speciosa*, *Melia azedarach*, *Mimusops Elengi*, *Salix tetrasperma* and flowering and ornamental plants have been proposed to be planted inside the premises.

19. **Project cost:** Total estimated cost of the project is INR 185.08 crores. The capital cost for environmental management of the proposed project is estimated to be Rs.70.4 lakhs and Rs. 20.6 lakhs per year will be required as annual recurring expenses for implementing the measures.

COMPONENT	CAPITAL COST (INR LAKH)	RECURRING COST (INR LAKH/YR)
Sewage Treatment Plant	40	4
Rain Water Harvesting System	15	3.75
Solid Waste Management	3	0.75
Environmental Monitoring	-	9
Green Area/ Landscape Area	2.4	0.6
Others (Energy saving devices, miscellaneous)	10	2.5
<b>Total</b>	<b>70.4</b>	<b>20.6</b>

20. **Environment Consultant:** The Environment consultant **M/s Grass Roots Research & Creation India (P) Ltd., Noida, U.P.** 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 Grass Roots Research & Creation India (P) Ltd., Noida, U.P** 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) Land schedule and kism of land.
- ii) Detailed drainage plan, internal drainage details, drainage permission with supporting documents and NOC for drainage from concerned authority.
- iii) Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water.
- iv) Copy of approval for safety and structural stability from appropriate authority.
- v) Status of NOC/permission letter from CGWA/WR Deptt, Govt. of Odisha respectively for drawl of ground water.
- vi) NOC from Airport Authority of India.
- vii) Layout plan and width of road for movement of Fire Tender.
- viii) Copy of fire recommendations.
- ix) The public drainage pipe passing near to the proposed project is 6 inch which is inadequate to accommodate the disposal of proposed treated water. Letter/layout plan from BMC for widening the 6 inch discharge pipe as stated by PP during presentation.
- x) Site layout w.r.t location of DG set and Stack including calculations of stack height and its connection layout plan beyond the height of building.
- xi) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.

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

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

## ITEM NO. 02

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. RAGHUPATEE ESTATE & HOLDING PRIVATE LIMITED FOR MULTISTORIED RESIDENTIAL PROJECT [2 BLOCKS OF (EB+G+11) AND 1 EWS BLOCK OF (S+11)] OVER REVENUE PLOT NO. 527,528,529,530, 531,531/917,532, 533,534, 557/1202, 557/1146, KHATA NO. 260,213,418/66, 418/394,418/393 OVER AN BUILT-UP AREA 79667.63 SQM. AT VILLAGE - JARIPADA, TAHASIL-CUTTACK, DISTRICT - CUTTACK OF SRI KOURAB KUMAR RATH - EC**

1. This proposal is for Environmental Clearance of M/s. Raghupatee Estate & Holding Private Limited for Multistoried Residential Project [2 Blocks of (EB+G+11) and 1 EWS Block of (S+11)] over Revenue Plot No. 527,528,529,530, 531,531/917,532, 533,534, 557/1202,557/1146, Khata no. 260,213,418/66, 418/394,418/393 over an built-up area 79667.63 sqm. at village - Jaripada, Tahasil - Cuttack, District - Cuttack of Sri Kourab Kumar Rath.
2. **Category:** The project falls under category "B" or activity 8 (a)-Building & Construction Project under EIA Notification dated 14th September 2006 as amended from time to time.
3. **Statutory clearances obtained:**

S. No	Permission	Department	Reference no. and Date
a)	Approval Building Construction	Sareikela Kharswan Jilla parishad	Application No. SKZP/GH/0018/2022/REV1 Date 29/12/2022 11:12:25
b)	DFO Territorial	Divisional Forest Officer, Seraikella Forest Division	Letter No. 1588, Date: 03/08//2022
c)	DFO Wildlife	Department of Forest, Forest Reserve and sanctuary	Letter No. 20220907, Date:09/09/2022
d)	CO certificate	CO Chandil	Letter No. 704, Date: 10/10/2020
e)	AAI Height Clearance NOC	Airport Authority of India	NOC ID: JAMS/EAST/B/091721/575455 Date: 08/11/2021
f)	Fire Advisory Clearance	Fire Service Department Ranchi	1237/Tech./2022, Date: 02/03/2022
g)	Affidavit Project Area & No Construction	M/s Creative Homes. by Mr. Manoj Kumar Agarwal	Date: 04/02/2023

S. No	Permission	Department	Reference no. and Date
h)	Assurance for Sewerage Discharge and solid waste disposal	Drinking Water and Sanitation Division, Sareikela	Letter No. 1144/saraikela Date: 30/07/2022
i)	Application for Permission to Abstract Ground Water for Infrastructure Use	CGWA (Central Ground Water Board)	Application Code: 87847
j)	Letter from Circle Officer's Office, Chandil regarding land report	Letter from Circle Officer's Office, Chandil regarding land report	Letter no. 704 on dated 10/10/2020
k)	Affidavit for Non availability of supply water, construction of STP and Wet land	Affidavit for Non availability of supply water, and construction of STP	submitted

- 4. Location and connectivity:** The site is located in the eastern part of the Twin City Bhubaneswar & Cuttack. The proposed project is over Revenue Plot No.:- 527,528,529,530,531,531/917,532,533,534,557/1202,557/1146, Khata no.260, 213,418/66, 418/394,418/393 at Village - Jaripada, Tehsil - Cuttack, District – Cuttack, Odisha in survey of India Topo Sheet no. F45T15 NE bounded by latitude 20.40131643807506° to 20.40427243792534° and Longitude 85.89585584751936° to 85.89762769633705°. Bhubaneswar railway station is 16 km away from the project site towards SSW direction. Mancheswar Junction station is 10.40 km away from the project site towards SSW direction. Patia railway station is 8.42 km away from the project site towards SSW direction. (Aerial distance).
5. Cuttack area falls in the Seismic Zone III & Seismic Intensity "moderate". This zone is called the moderate damage risk Zone & Zone factor Z = 0.16 as per IS: 1893.
6. The proposed site is being used for Residential purpose under Cuttack Municipal Corporation. Land has been acquired for Residential development - under Cuttack Development Authority (proposed project site is comes under Mouza - Jaripada which is notified for inclusion under CDA area (Comprehensive Development Plan Area Under the Jurisdiction of Cuttack Development Authority).
- 7. Topography and access to the building:** Site is flat land with average elevation of 43-45 m AMSL. Project site is well connected with New NH-16 which connects to Bhubaneswar to Cuttack at 1.5 km west direction. Site is flat land with maximum elevation of 46.49 m AMSL. Project site is well connected with road. Site also connects to NH-16 which is nearer (1.5 Km) to the project site towards West direction. As per the present CDP, a 200 feet wide master plan

Proceedings of the SEAC meeting held on 03.05.2023

Environmental Scientist, SEAC

Road has been proposed suggesting the road widening proposal to existing canal embankment road. From NH-16, on both sides of the canal embankment roads are existing out of which the right side canal embankment have been developed with black topped road but the left side canal embankment over which the plot is getting access to the left side canal embankment is under development/developing.

8. **Land use details:** Total land acquired for this project is 22551.44 m<sup>2</sup> or 5.5725 Acres or 2.2551 Ha. The proposed project will have a total built-up area of 79667.63 sqm. (Including Basement).

**Table: Land use details**

S. No.	Particulars	Area (in m <sup>2</sup> )
a)	Plot Area (POSSESSION)	22551.44 m <sup>2</sup> or 5.5725 Ac. or 2.2551 Ha.
b)	Ground coverage	5705.88 sqm (25.30% of total plot area )
c)	Internal Road	8136 sqm (36.077% of total plot area )
d)	Paved Area & Open Parking	1281 sqm (5.680 % of total plot area )
e)	Area for WTP & STP	148 sqm (0.656 % of total plot area )
f)	Area for plantation & Green belt on podium	7136.56 sqm (31.6 % of total plot area )
g)	Area for other services	144 sqm (0.656 % of total plot area )
h)	<b>Total Built Up Area</b>	<b>79667.63 sqm</b>
i)	Total FAR Area of Two Blocks 1&2	56337.41 sqm (2.498 )
j)	FAR area of Basement	785.81 sqm
k)	FAR area of Block-1	27560.8 sqm
l)	FAR area of Block-2	27560.8 sqm
m)	FAR area of society room	430 sqm
n)	FAR area of Block-3	4561.15 sqm

**Table: Building area details**

COVERAGE	BLOCK-1 (in sqm)	BLOCK-2 (in sqm)	EWS BLOCK-3 (in sqm)	SOCIETY (in sqm)	ICT (in sqm)	PUBLIC WASHROM	TOTAL BUA(in sqm)
<b>BASEMENT</b>	17233.80 (parking-16356.97, utility-785.81)						17233.8
<b>STILT FLOOR</b>			482.92sqm(Parking-403.1, utility-44)				482.92
<b>GROUND FLOOR</b>	2396.48	2396.48		430	20.25	18.88	5262.09
<b>FIRST FLOOR</b>	2134.75	2134.75	482.92				4752.42
<b>SECOND FLOOR</b>	2355.36	2355.36	482.92				5193.64
<b>THIRD FLOOR</b>	2355.36	2355.36	482.92				5193.64
<b>FOURTH FLOOR</b>	2355.36	2355.36	482.92				5193.64
<b>FIFTH FLOOR</b>	2355.36	2355.36	482.92				5193.64
<b>SIXTH FLOOR</b>	2355.36	2355.36	482.92				5193.64
<b>SEVENTH FLOOR</b>	2355.36	2355.36	482.92				5193.64



COVERAGE	BLOCK-1 (in sqm)	BLOCK-2 (in sqm)	EWS BLOCK-3 (in sqm)	SOCIETY (in sqm)	ICT (in sqm)	PUBLIC WASHROM	TOTAL BUA(in sqm)
EIGHT FLOOR	2355.36	2355.36	482.92				5193.64
NINTH FLOOR	2355.36	2355.36	482.92				5193.64
TENTH FLOOR	2355.36	2355.36	482.92				5193.64
ELEVENTH FLOOR	2355.36	2355.36	482.92				5193.64
<b>TOTAL</b>	<b>28084.83</b>	<b>28084.83</b>	<b>5795.04</b>				<b>79667.63</b>

9. **Water requirement:** During Operation Stage, total water requirement is 284 KLD (fresh water + flushing water). Total Fresh Water requirement is 187 KLD. Total Flushing Water requirement is 97 KLD. Wastewater generated is 228 KLD will be treated in STP of capacity 340KLD and treated water recovered is 182 KLD. During Dry Season the treated water of 182 KLD will be completely used in Flushing (97KLD), Landscape (40KLD) and Road/Vehicle Washing (45 KLD) and during monsoon season 40 KLD of surplus treated waste water will be discharge to nearest drain. Source of fresh water supply will be met through municipal water supply main/CGWA. The project proponent has applied to Central Ground water Board for NOC vide application no 4669 dated 30.12.2022. A total of about 0.66 day's requirement as storage has been propose at site for Underground Raw Water Sump & Underground Treated Water Sump.

10. Presently there is no municipal (PHED) water supply system located near our project site. Hence we will meet the daily fresh water requirement through ground water during the operation phase. We applied to CGWB for ground water. When public supply water system is available around the project site, then we will use the supplied water to meet the daily fresh water requirement. We will keep the groundwater for standby.

S.No.	Description	No. of Floors	No. of Flats/Floor	Total No. of Flats	Total No. of Population	Total water requirement	Fresh	Flushing	Waste water generate	Treated water recovered
	INTERNAL – FLATS									
1	BLOCK-1									
a)	3Bed Room Flat	12	12	140	700	94500	63000	31500	75600	60480
b)	5 Bed Room Flat	12	2	24	168	22680	15120	7560	18144	14515.2
2	BLOCK-2									
a)	3Bed Room Flat	12	12	140	700	94500	63000	31500	75600	60480
b)	5 Bed Room Flat	12	2	24	168	22680	15120	7560	18144	14515.2

S.No.	Description	No. of Floors	No. of Flats/Floor	Total No. of Flats	Total No. of Population	Total water requirement	Fresh	Flushing	Waste water generate	Treated water recovered
3	BLOCK-3									
a)	1Bed Room Flat	11	9	99	297	40095	26730	13365	32076	25660.8
				427	2033	274455	182970	91485	219564	175651.2
4	Society Room				52	780	260	520	624	499.2
5	Floating Popoulation				203.3	9148.5	4066	5082.5	7318.8	5855.04
					2288.3	283603.5	187036	96567.5	227506.8	182005.44
	<b>TOTAL</b>				<b>2288</b>	<b>284 KLD</b>	<b>187 KLD</b>	<b>97 KLD</b>	<b>228 KLD</b>	<b>182 KLD</b>

11. **Wastewater management/STP:** Wastewater generated during the operational phase from will be treated in well-designed sewage treatment plant having capacity of 340 KLD. Approximately, 228 m<sup>3</sup>/day of wastewater will be generated during the operational phase from domestic use and other uses.
12. **Rainwater harvesting details:** The total discharge from the total catchments area of 14243sqm. would be 160.1 cum/10 minutes storm, assuming 100mm/hour rainfall intensity. It has been calculated to provide 13 Nos of storm water collection or recharge pits for storm water harvesting at selected locations, which will catch the maximum surface run-off water and roof water will be stored in a storage tank having capacity of 250 m<sup>3</sup>. The volume of harvesting pits is 24 m<sup>3</sup>.
13. **Power requirement:** The power supply shall be supplied by TPCODL. The maximum demand load is estimated at 2313 KW. Back up DG sets. is 2 x 400 KVA with stack height of 42.7 metres. Permission for Electrical supply to the proposed project site is received from office of the Divisional Manager (Electrical) on dated 09/07/2021. It is proposed to have 4No's of 500KVA & 1 No's of 315KVA Transformer for Apartment & 1 No's of 400KVA Transformer for Common Area. 2nos of 400kVA DG sets are planned at podium service yard area with set acoustics to meet the demand. The Diesel Consumption of 400KVA DG set at required full demand of around 100 Litres/hour. The Bulk diesel storage tank is not planned but suggested to store 200L drums at those locations. There is provision of Power backup for the residential project will be through DG sets of total capacity 800 KVA (2 No. 400 KVA) silent DG Set.
14. **Solar power supply:** Approximately 10KWp solar PV system is proposed on the club house terrace. Solar system is planned with String inverters of 5/7.5KW range and without batteries so that power generated can be directly used.
15. **Parking details:** As per Cuttack Building Bye-laws and NBC-2016, Parking Area Required for Residential area Block-1 & 2 is 18637.11 sqm. (30% of the FAR area of block-1 &2 including visitors parking). Parking area provided for Residential area Block - 1 & 2 is 19098.97 sqm (31% of FAR area of block-1 & 2 including visitors parking). No. of ECS provided is 555 nos. Parking required for Block-3 (EWS) @10% of FAR Area of 5795.04 sqm is 579.504 sqm. Total parking

provided for Block-3 (EWS block) is 645 sqm (including visitors parking). Number of ECS provided is 28.

PARKING PROVIDED FOR B-1 AND B-2 AND SERVICE BLOCK			NO. OF ECS
In Basement	16356.97	Sqm	511
In Open Area	1002	Sqm	44
<b>Total</b>	<b>17358.97</b>	<b>Sqm</b>	<b>555</b>
visitors parking @10% of total parking	1740	Sqm	<b>87</b>
<b>Total parking Provide (30.81% of FAR area)</b>	<b>19098.97</b>	<b>Sqm</b>	<b>642</b>
<b>PARKING PROVIDED FOR BLOCK-3 (EWS UNITS)</b>			
Parking required for EWS @10% of BUILT UP AREA	579.504	Sqm	
Parking provided in open area	182	Sqm	9
Parking provided in stilt floor	403.1	Sqm	18
<b>TOTAL</b>	<b>585.1</b>	<b>Sqm</b>	<b>27</b>
visitors parking required @ 10 % 585.1Sqm	58.51	Sqm	
Parking provided in open space	60	Sqm	3
<b>Total parking Provide</b>	<b>645</b>	<b>Sqm</b>	<b>30</b>
Total parking required for EWS block	461.61	<b>Sqm</b>	
Total parking Provided for EWS block	645.1	<b>Sqm</b>	
<b>Total ECS PROVIDED</b>			<b>672</b>
<b>No. of Dwelling Units</b>			
Block-1	164		
Block-2	164		
Block-3	99		
<b>TOTAL NO. OF UNIT</b>	<b>427</b>		

16. **Greenbelt:** The green area will consist of evergreen tall and ornamental trees and ornamental shrubs to be planted inside the premises. The green area will be developed approx. 7136.56 m<sup>2</sup> (31.645 % of the plot area for plantation including podium green belt area). Plantation provision will be 300 in numbers. Trees like *Azadirachta indica*, *Cassia fistula*, *Terminalia arjuna*, *Butea monosperma* etc. and flowering and ornamental plants have been proposed to be planted inside the premises. The plantation matrix adopted for the green belt development includes pit of 2m x 3m size with a spacing of 2 m x 2 m. Multi-layered plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt.
17. **Solid waste details:** The solid waste generated from project will be mainly domestic in nature and the quantity of the waste will be 1.030 Ton/day. Solid wastes generated will be segregated into biodegradable 0.412 T/Day (waste vegetables and foods etc.) and non-biodegradable or recyclable 0.618 Ton/day. (Papers, cartons, thermo-cool, plastics, glass etc.). For Operation

Phase Total MSW generated 1030 kg/day (Biodegradable- 412 Kg/day and Non-biodegradable waste 618 kg/day).

S.No	Description	No. of Floors	No. of Flats/Floor	Total No. of Flats	Total No. of Population	BIODEGRADABLE	NON BIODEGRADABLE	TOTAL MSW @0.450KG/CPD
	INTERNAL – FLATS							
1	BLOCK-1							
a)	3Bed Room Flat	12	12	140	700	126000	189000	315000
b)	5 Bed Room Flat	12	2	24	168	30240	45360	75600
2	BLOCK-2							
a)	3Bed Room Flat	12	12	140	700	126000	189000	315000
b)	5 Bed Room Flat	12	2	24	168	30240	45360	75600
3	BLOCK-3							
a)	1Bed Room Flat	11	9	99	297	53460	80190	133650
				427	2033	365940	548910	914850
4	Society Room				52	9360	14040	23400
5	Floating Population				203.3	36594	54891	91485
					2288.3	411894	617841	1029735
	<b>TOTAL</b>				<b>2288</b>	<b>412 KG/DAY</b>	<b>618 KG/DAY</b>	<b>1030 KG/DAY</b>

18. **Project cost:** Estimated cost of the proposed project is 178.479 Cr. EMP budget includes a capital cost of 179.85 lakhs and recurring cost of 11.3 lakhs. Total Cost for labourers' welfare bear a capital cost of Rs. 3,80,000 and recurring cost of Rs. 3,15,300.

Component	Capital Cost in Lakh	Description of EMP during Construction	Description of EMP during Operation Phase	Post project Recurring Cost /Annum

Landscaping	10.8	1.5	9.3	1.5
Rainwater Harvesting	10	8.5	1.5	0.7
Solid Waste Management	8.7	2.5	6.2	1.2
STP & WTP	45.9	40.9	5	1.2
Others (Energy saving devices, Fire fighting measures, miscellaneous)	21.5	18.7	2.8	2
Acoustic Enclosure & DG Set Stack	45.5	40.7	4.8	0.8
Environmental Monitoring	7	2	5	3
Solar PV Works & Water Heating System	26.65	2.5	24.15	1
PPE for workers & Health Care	3.8	3.15	0.65	0.5
	<b>179.85</b>	<b>120.45</b>	<b>59.4</b>	<b>11.9</b>

19. **Environment Consultant:** The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Patia**, 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 Consultancy Services Pvt. Ltd., Patia**, 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) Traffic Study Report to be submitted duly vetted by institute of repute.
  - ii) Detailed drainage plan, internal drainage details, drainage permission with supporting documents applied for NOC for drainage from concerned authority.
  - iii) Copy of all statutory clearances applied/obtained.
  - iv) Detailed calculation of greenbelt with breakup and dimensions.
  - v) Copy of fire recommendations.
  - vi) Width of the road for Fire Tender.
  - vii) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.
  - viii) Drain connectivity and discharge point.

- ix) Permission/NOC from appropriate authority for laid down of drainage pipe in Government land that connects from proposed site to public drain along the National highway road.
- x) Re-examine and submit revised water balance.
- xi) Clarification for CRZ that the area of proposed site doesn't fall under CRZ, as river bank is within 500m and the canal is passing closely to the site as visible in KML.
- xii) Proposal to increase in usage of treated waste water in premises by segregating grey water and black water and its usage for plantation and car washings and thereby reducing quantity of discharge to drain.

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

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

**ITEM NO. 03**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. ODISHA MINERAL EXPLORATION CORPORATION LIMITED (OMECL) FOR PRODUCTION OF IRON ORE 2.0 MTPA FROM RENGALBEDA (NE) IRON ORE BLOCK OVER M.L AREA OF 24.203 HA. VILLAGE- NUAGAON & GANDHALPADA, TEHSIL- BARBIL, DISTRICT- KEONJHAR OF SRI SHAILENDER KUMAR SINHA (DIRECTOR, GEOLOGY) - EC**

1. This proposal is for Environmental Clearance of M/s. Odisha Mineral Exploration Corporation Limited (OMECL) for production of Iron Ore 2.0 MTPA from Rengalbeda (NE) Iron Ore Block over M.L area of 24.203 Ha. Village- Nuagaon & Gandhalpada, Tahasil- Barbil, District- Keonjhar of Sri Shailender Kumar Sinha (Director, Geology).
2. **Category:** The project falls under category "B" or activity 1 (a) - Mining of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. To ensure meeting the iron ore requirements of the end-use-industries, the State Government with the approval of Ministry of Mines, Government of India, communicated vide Letter No.16/71/2020-MVI, dated 05.01.2021 has reserved the Rengalbeda (NE) Iron Ore Block over an area of 24.203 hectares in Barbil Tehsil, Keonjhar District in favor of OMECL, under section 17A (2) of MMDR Act 1957 vide Notification No. 946/SM, Bhubaneswar, dated 28.01.2021 by Department of Steel & Mines, Odisha.
4. **Letter of Intent:** The State Government of Odisha issued letter of Intent(LOI) vide Letter No. 2215/SM, Bhubaneswar, dated 26.02.2021 to Odisha Mineral Exploration Corporation Limited (OMECL) for grant of Mining Lease for Rengalbeda (NE) Iron Ore Block over an area of 24.203

hectares (as per DGPS survey) in village Nuagaon and Gandhalpada under Barbil Tehsil, Keonjhar District of Odisha State, for a period of 50 years.

5. Mining Plan with Progressive Mine Closure Plan has been approved by IBM vide letter No: MP/A/43-ORI/BHU/2020-21/dt. 09.04.2021 under Rule 16(1) of MCR, 2016 and Rule 23 of MCDR, 2017 respectively for a period of 5 years after execution of the lease deed for production of iron ore to the tune of 2.0 MTPA (RoM).
6. NOC from CGWA for drawl of ground water (60 KLD) vide ref. no. CGWA/NOC/MIN/ORIG/2022/16596 valid up to 30.09.2024. Application for allocation of surface water (120 KLD) from Dept. of Water Resources, Govt. of Odisha, shall be submitted prior to commencement of mining operation.
7. Site-Specific Wild-Life Conservation Plan (SSWLCP) is under preparation by Divisional Forest Officer, Keonjhar Forest Division based on the information submitted by OMECL vide letter no. 785/OMECL/2022 dtd. 06.08.2022 with a copy to Divisional Forest Officer, Bonai Forest Division vide letter no. 786/OMECL/2022 dtd. 06.08.2022
8. Application for diversion of 24.203 ha of forest land submitted by OMECL vide proposal No. FP/OR/MIN/1142246/2021, dated 17.05.2021 is under examination by PCCF(Nodal) for onward recommendation for approval.
9. **Statutory approval:**

S. No.	Particulars	Status	Approval by	Letter No./Proposal No.	Date
<b>Approvals obtained</b>					
a)	Approval of the Central Government for reservation	Approved	Government of India Ministry of Mines	16/71/2020-MVI	05.01.2021
b)	Approval for the Land	Approved	Government of Odisha Steel & Mines Department	946-IV(B)SM-14/2020/SM	28.01.2021
c)	Letter of Intent	Approved	Government of Odisha Steel & Mines Department	2215-IV(B)SM-14/2020/SM	26.02.2021
d)	Approval letter for Mining Plan along with Progressive Mine Closure Plan (PMCP)	Approved under Rule 16(1) of MCR, 2016 & Rule 23 of MCDR, 2017	Indian Bureau of Mines	MP/A/43-ORI/BHU/2020-21	09.04.2021

Proceedings of the SEAC meeting held on 03.05.2023

Environmental Scientist, SEAC

e)	Ground water Clearance	Approved	Central Ground Water Authority (CGWA)	NOC No. CGWA/NOC/MIN/ORIG/2022/16596	Valid from- 01.10.2022 Valid up to- 30.09.2024
<b>Approvals in Pipeline</b>					
i)	Forest Clearance	Proposal at PCCF(N)	Central Government	FP/OR/MIN/142246/2021	17.05.2021
ii)	Site specific Wildlife conservation Plan	Plan preparation at DFO, Keonjhar	PCCF(WL) & CWLW	-	-

10. The proposed mine for extraction of Iron Ore is located in two villages namely Nuagaon & Gandhalpada, Tehsil- Barbil of Keonjhar District of Odisha granted over an area of 24.203 Ha. under which 17.034 Ha.is revenue forest land and 7.169 Ha.is non-forest land recorded as forest as on 25.10.1980 (SABIK).

Village	Khata No.	Plot No.	Total Land Area (Ha.)
Gandhalpada	46	50/p, 52/364/p, 52/p, 49/p, 48/p, 51/p, 47/p	2.117
Nuagaon	60	395/572/p, 395/p, 389/566/p, 393/p, 390/p, 296/p	18.974
	62	397/p, 395/571/p, 390/568/p, 390/567/p, 396/p, 394/p, 389/p	3.112
TOTAL			24.203

11. **TOR detail:** SEIAA, Odisha authority issued Terms of Reference (Standard & Specific) for the proposed project Vide File No. 3015/SEIAA on dated 28th September 2021.

12. **Public hearing details:** Public Hearing in respect of Keonjhar district was conducted on 21.05.2022 at 11.00 A.M at Village Gandhalpada, G.P.-Guali, P.S- Rugudihi (Khata No. 48(AJA), Plot No. 194, Area- Ac. 1.150 dec) in Keonjhar District in accordance with the Ministry of Environment, Forest & Climate Change, Govt. of India, EIA Notification No. SO-1533(E) dtd. 14.09.2006. Issues raised in public hearing area employment, health care, rehabilitation, mines operation, welfare and pollution control measures. Cost of Public hearing compliances is allocated approx. Rs.100.45 Lakhs under CER. This cost will be continue based on public demand for future. All costing are done with terms of health, education, and infrastructure and environment protection.

13. **Location and connectivity:** The Project area is located between latitude 21° 57' 51.56" N to 21° 58' 09.73" N & longitude 85° 16' 03.72"E to 85° 16' 29.78" E and is covered by survey of India Toposheet No. F45H4, F45H8, F45N1, F45N5 (formerly 73G/5) in Villages Nuagaon & Gandhalpada; Tehsil – Barbil, District- Keonjhar in the State of Odisha. The mining lease area is approachable from Barbil town covering a distance of 26 km. The mining lease is connected by NH-215 (Panikoili- Rajamunda), which is passes through the lease area. Also, the area can be approachable from Koira -Rajamunda Road which is by the side of NH - 215 at a distance of 6 km. The District Head Quarters Keonjhar is at a distance of 85 km from lease area. The nearest railway station is Barbil railway siding which is 25 Km away from the Rengalbeda (NE) Iron Ore Block. Banspani Railway Station, which is 30 km away from the block, lying on Tatanagar -



Barbil section of the South-Eastern Railway. Nearest river is Karo Nadi at 1.23km. No National Park or Wildlife Sanctuary within 10 km radius. Nearest Reserve forest is Mendhamaruni RF – 2.12 km. Jharkhand - Odisha Interstate Boundary is at 5.19km.

14. The lease area does not form a part of any National Park or Wildlife Sanctuary or Critical Wildlife habitat. No protected area is situated in the lease area or within the Zone of Influence. The lease area is surrounded by a series of existing mines and no important wild animals are noticed in the area.
15. **Topography & Drainage:** The Lease area is generally a semi-rugged terrain with elongated hill trendings in NW-SE direction, low mounds and wide valleys. Maximum elevation - 594 m above MSL and Minimum elevation - 548 m above MSL.
16. Geometry of the ore body has been reconstructed using borehole intersection data with 100 m borehole spacing. Strike influence has been considered in most cases as 50 m on both the directions. Tonnage factor is considered as 3.5 gm/cc for high grade ore and 2.7 gm/cc for low grade ore. A factor of 20% is excluded towards accuracy in sampling. 100% recovery factor has been taken into account for estimation of reserve as the deposits are bedded stratiform and tabular of irregular habit with lateritic cap underlain by hematite jasper or shale. Some interbands of waste materials are also found.
17. **Life of Mine:** The production rate planned for the mine is 2.0 MTPA. Considering 16.3 Million Tonnes of probable category (UNFC code: 122), the expected life of the mine at the above mentioned rated capacity will be around 9 years including existing plan period. Further exploration will be proposed in the conceptual period to prove existence of mineralization beyond existing UPL. This will further add to resources thus will increase life of mine beyond lease period.
18. **Reserves and Mining:** Total Reserves - 2,72,82,778.96 Tonnes (Fe > 45%), 46,96,888.40 (Fe > 45% < 55%) and 2,25,85,890.56 (Fe > 55%). The annual production is targeted at 2.0 MTPA of ROM. The mine is proposed to be worked by mechanized opencast mining method by engaging HEMM with deep hole drilling and blasting. The blasted ROM will be fed to a Crushing/Screening unit for further sizing and screening to CLO (+10-40/+5 -18mm) and fines (-10/-5mm). The output is to be sent to designated stack yards which will be sold to industries.
19. **Mining method:** The Rengalbeda (NE) Iron Ore Block is to be considered under Category-A (Fully Mechanized Opencast category) as per the IBM guidelines. The mine is proposed to be worked by mechanized opencast mining method by engaging HEMMs with deep hole drilling and blasting. Bench height & width are proposed to be 10 m and 15 m respectively. Average bench slope is proposed to be 70°- 80°. Drill hole diameter is proposed to be 115 to 150mm. Blasting is proposed to be carried out with emulsion/slurry explosive. NONEL is proposed to be used to control ground vibration & better optimization in blasting. The blasted ROM is proposed to be fed to mobile crusher & screening plants for further sizing and screening to CLO (+10-40 / +518mm) and fines (-10/-5 mm). The output is to be sent to designated stack yards for selling in domestic markets. The production capacity envisaged for the mine is 2 million tonnes of ROM per year. Blast hole drilling are proposed by DTH drills of 115/150 mm dia. Single or multi row drilling with hole to hole delay are proposed. Proper charging, stemming and control blasting by using NONEL of different delay interval are proposed to reduce the ground vibration. Waste/

ROM material is proposed to be loaded into 25 - 35t capacity dumpers using 2.5-4.5m<sup>3</sup> excavators which in turn is to be transported to dump yard or crushing & screening units. ROM after processing in crushing and screening plants is to be stacked in the designated stock yards within the lease hold area for selling to buyers. The output is to be sent to designated stock yards which will be sold to industries.

20. **Production Details:** The year-wise in-situ tentative excavation for the first five years from the date of opening of the mine is given as follows :-

Year	Quarry	Total Tentative Excavation	Top Soil	OB/SB/IB	ROM (M Cu. m)			ROM: Waste
					Ore	Mineral Rejects	Total ROM	
					M CuM	M CuM	M CuM	M CuM
1 <sup>st</sup> Year	Pit-1	0.81	0.00	0.02	0.53	0.26	0.79	1:0.02
<b>Sub Total</b>		<b>0.81</b>	<b>0.00</b>	<b>0.02</b>	<b>0.53</b>	<b>0.26</b>	<b>0.79</b>	<b>1:0.02</b>
2 <sup>nd</sup> Year	Pit-1	0.81	0.00	0.01	0.53	0.27	0.80	1:0.016
<b>Sub Total</b>		<b>0.81</b>	<b>0.00</b>	<b>0.01</b>	<b>0.53</b>	<b>0.27</b>	<b>0.80</b>	<b>1:0.016</b>
3 <sup>rd</sup> Year	Pit-1	0.67	0.00	0.009	0.65	0.01	0.66	1:0.014
<b>Sub Total</b>		<b>0.67</b>	<b>0.00</b>	<b>0.009</b>	<b>0.65</b>	<b>0.01</b>	<b>0.66</b>	<b>1:0.014</b>
4 <sup>th</sup> Year	Pit-1	0.80	0.00	0.003	0.79	0.01	0.80	1:0.004
<b>Sub Total</b>		<b>0.80</b>	<b>0.00</b>	<b>0.003</b>	<b>0.79</b>	<b>0.01</b>	<b>0.80</b>	<b>1:0.004</b>
5 <sup>th</sup> Year	Pit-1	0.69	0.00	0.004	0.66	0.03	0.69	1:0.006
<b>Sub Total</b>		<b>0.69</b>	<b>0.00</b>	<b>0.004</b>	<b>0.66</b>	<b>0.03</b>	<b>0.69</b>	<b>1:0.006</b>
<b>Grand Total</b>		<b>3.78</b>	<b>0.00</b>	<b>0.046</b>	<b>3.16</b>	<b>0.58</b>	<b>3.74</b>	<b>1:0.012</b>

21. **Bench Geometry:** In course of mining a single quarry having total 8 nos. of benches will be developed. The top RL of the bench will be at 580 m and bottom RL of the bench will be at 500m. ROM will be trucked to screen plant while waste will be trucked to the earmarked waste area. As there is overburden present in the proposed excavation area, all benches will be developed in the ore body. The waste generation due to removal of the inner burden will give rise to the average stripping ratio of 1:00046 M T / Cum during the modified plan period. The individual bench faces will be kept nearly vertical (70°-80°) whereas the overall quarry slope angle (the angle between the line joining the toe of bottom bench and the crest of the top bench with the horizontal) is/ will be maintained at less than 45° with the horizontal.

22. **Overburden Management:** A total of 0.1 Million CuM of wastes will be generated from entire Rengalbeda (NE) Iron ore Block up to conceptual stage. Out of the total 0.1 Million CuM of waste generated up to conceptual, approximately 30% i. e. 0.03 Million CuM will be utilized for road formation, maintenance and berm formation and the remaining 0.07 Million CuM waste will be dumped at proposed dump location during the conceptual period. The OB dump areas will be compacted and afforestation will be carried out on the terraces as well as along the slopes before rehabilitation. Topsoil being generated during mining shall be used for rehabilitation & also for avenue plantation.

23. **Waste generation and storage:** Cumulative quantity of 0.046 million m<sup>3</sup> waste will be generated during the approved Mine Plan period. It will be stored in waste dumps over total area of 0.589 ha. Top & bottom of the dump will be 580 mRL & 500 mRL respectively. Retaining wall & garland drains along with settling pits will be constructed to protect the surrounding environment from wash-offs etc. and after that waste material shall be disposed of in a retreating fashion.
24. The garland drains will be dug around 1 m beneath the adjoining contour level at the lower peripheral areas of the dump. The width of the drains shall be around 1.5 m. A series of 3 settling pits along bottom of the dump of 10 m length, 10 m width and 3 depth will be provided to arrest the wash-off solid particles. The settling tank will be provided with two compartments each of around 5 m width to arrest the suspended solids. The retaining walls will be of 1.5 m height and 1.2 m width at the top and around 1.5 m at the base.
25. Total RoM of iron ore produced from the mine will be subjected to screening and crushing. The lumpy ore gregated in the screening process will be crushed and further screened to produce 0-10mm/ 0-5mm (Fines), 10-40 mm/ 5-18mm (CLO). The sized ore along with the generated fines will be stored in the earmarked stackyards.
26. A road connection from NH 215 to mineral processing & stacking yard at NE corner near OB dump will be made for this provision of approximate 300 m X 15 m concrete road has been planned with a budgetary provision of 30.0 Lakhs in EMP budget.
27. Transportation of iron ore has been proposed through 4 nos. of railway sidings such as Jurudi Railway Siding, Barbil Railway Siding, Barsua Railway Siding & Banspani Railway Siding.
28. During the 1st and 2nd year of plan period, ultimate pit limit is 550 m AMSL. So, there will be no seepage during this period. The seepage will start from the 3rd year mining operation due to intersection of ground water table. Prior to the intersection; the dewatering permission shall be obtained from CGWA.
29. **Water requirement:** The total water requirement is about 180 KLD (For Drinking & Domestic Uses - 60 KLD and for Mining Operations, dust suppression and Plantation - 120 KLD). For Ground water abstraction of 60KLD, NOC has been obtained from CGWA vide no. CGWA/NOC/MIN/ORIG/2022/16596; which is valid from 01.10.2022 to 30.09.2024. For 120 KLD Surface water allocation shall be obtained from Dept. of Water Resources, Govt. of Odisha after obtaining EC.

Year	Ground water(m <sup>3</sup> /year)	Surface water(m <sup>3</sup> /year)	Total Requirement (m <sup>3</sup> /year)	Mine Seepage (m <sup>3</sup> /year)	Reduction of consumption (m <sup>3</sup> /year)	% of reduction
1 <sup>st</sup>	21,900	43,800	65,700	0	65,700	0
2 <sup>nd</sup>	21,900	43,800	65,700	0	65,700	0
3 <sup>rd</sup>	21,900	43,800	65,700	189.02	65,510.9	1.0
4 <sup>th</sup>	21,900	43,800	65,700	4,487.70	61,212.3	0.93
5 <sup>th</sup>	21,900	43,800	65,700	9,022.47	56,677.5	0.86

30. **Rainwater harvesting:** Total Rainwater Harvesting potential is 10650m<sup>3</sup>/Year or 0.011 MCM. So % of recharge & rainwater harvesting potential is 10650/ 83647.75 x 100 = 12.73 %.

Sl. No.	Particulars	Area (m <sup>2</sup> )	Run off Coefficient	Rainfall (m)	Rainwater potential (m <sup>3</sup> /Year)
a)	Roof Top of building/ shed	90	0.85	1.561	119.42
b)	Road/Paved area	16520	0.65	1.561	16762.02
c)	Open Land	179440	0.2	1.561	56021.17
d)	Green Belt	45890	0.15	1.561	10745.14
	Total (m <sup>2</sup> )	241940			83647.75

31. **Power Requirement:** Power utilization for this project is 241 KW and DG sets of 125 KVA will be used for emergency backup. Power permission will be obtained from TP Northern Odisha Distribution Limited (TPNODL) after obtaining EC.

32. **Diversion of Transmission Power Line:** A 132 KV transmission line is passing through M.L area from OPTCL Grid Station (132/33 KV) at Barbil under Keonjhar district to Kamanda Steel Plant of M/s Rungta Mines Ltd. (RML) in village Kamanda in Sundargarh District. Out of 31.806 ha of approved forest land pertaining to transmission line of M/s RML, 1.551 ha comes within Rengalbeda Mining Lease of M/s OMECL. The high-tension power line passes through the M.L area, which may adversely affect the mining, hence, considering safety aspects, OMECL requested M/s RML for revision in the alignment of the transmission line. M/s RML issued NoC vide letter No. RML/KSP-466/417/22-23 dtd. 20.12.2022 in favor of OMECL and also submitted forest diversion proposal (vide no. FP/OR/TRANS/408503/2022) by re-routing the transmission line outside the ML area to enable OMECL to use 1.551 ha of forest land for mining and ancillary purposes.

33. **Solar power detail:** Total Solar Power provision for the proposed project is 113 x 50 = 5650 W which is 6 KW. Percentages of Solar Power out of total Power save = (6/ 241) KW x 100= 2.48 says 2.5%.

34. **Mode of transportation:** The proposed production of mine is 2.0 MTPA (ROM) corresponding to the production of 2.0 MTPA Saleable Iron Ore. Therefore 70% of the dispatch i.e. 1.40 MTPA will be by public railway siding and maximum 30% of the dispatch i.e. 0.60 MTPA will be by road. Transportation of iron ore has been proposed through 4 nos. of railway sidings such as Jurudi Railway Siding, Barbil Railway Siding, Barsua Railway Siding & Banspani Railway Siding.

35. **Traffic density study** conducted by NIT Rourkela for carrying capacity of road inside the mines and at haulage roads, intersecting points of haulage road with public road are covered in this EIA Report. From the findings, it is observed that the existing road network will be adequate to accommodate the additional traffic load and complied with IRC guidelines and LOS ranges from 'A – B'.

36. **Greenbelt:**

Year	Location	Area of Plantation (Ha)	No of Saplings	Cost of Plantation	Location	Name of the Species
1 <sup>st</sup> Year	Between boundary pillar A to C	0.25	625	93750	Boundary Safety zone area	Neem, Mango, Chakunda, Sissam, Krishnachuda, Radhachuda, Shrubs
2 <sup>nd</sup> Year	Between boundary pillar C to D	0.28	700	105000		
3 <sup>rd</sup> Year	Between boundary pillar D to G	0.50	1250	187500		
4 <sup>th</sup> Year	Between boundary pillar G to A	0.35	875	131250		
5 <sup>th</sup> Year		Maintenance				
Total		1.38Ha.	3450nos.	Rs.517500		

37. **Baseline details:** Collection of the baseline data including Air, Water, Soil, Noise, Ecology & Biodiversity commenced between 1st October, 2021 to 31st December, 2021 covering Post-Monsoon season.

- a) **Ambient air quality:** PM10 varied from 43.7 to 94.2 µg/m<sup>3</sup>, PM2.5 from 22.7 to 50.3 µg/m<sup>3</sup>, SO<sub>2</sub> from 4.6 to 16.3 µg/m<sup>3</sup>, NO<sub>x</sub> from 10.3 to 30.3 µg/m<sup>3</sup> and CO from 0.16 to 0.67 mg/m<sup>3</sup>. Respirable free silica (%) ranged from 0.37 to 0.69.
- b) **Surface water analysis:** Surface water samples show slight variations in colour which values lies between 5 Hazen units to 25. pH value is consistent and lies around 7 with a maximum value of 7.5 (SW 7) to a minimum of 6.7 (SW 6). Dissolved Oxygen values ranges from 4.6 mg/l (SW 6) to 6.3 mg/l (SW 1). Turbidity varies from 6.7 (SW 4) to 24.5 (SW2) NTU. Chloride value ranges from 9.0 mg/l (SW1) to 22.0 mg/l (SW4). Total Dissolved Solids range from 29.0 mg/l (SW1) to 162.0 mg/l (SW4). Electrical Conductivity value ranges from 47.8 (SW 7) to 248.6 (SW 4) Oil and grease value lie below detectable level for all locations. BOD ranges from 2.0 mg/l (SW 5) to 2.8 mg/l (SW 6) & not detected in other locations. Higher value of BOD is due to anthropogenic activities. None of the heavy metals are detectable as well as neither are Phenolic compounds detectable in any of the samples. Total coliform values lie between 14 (SW4) to 47 (SW6).
- c) **Ground water analysis:** Groundwater samples are all within the acceptable limits with respect to colour. The odour and taste of groundwater is also agreeable. Turbidity values ranges from less than 1 (GW 7) to 4.92 (GW 3) NTU. pH values varies from 5.5 (GW 6) to 6.4 (GW 8). Total hardness varies from 12.0 (GW 2 & GW 7) to 78 (GW 6) mg/l. Chloride content varies 4.0 mg/l (GW 1 & GW 7) to 34.0 mg/l (GW 6). TDS values range from 14.0 (GW 2 & 7) to 143 (GW 6) mg/l. Calcium and Magnesium values are within permissible

limits. Heavy metals and hexavalent chromium are all below detectable level. Aluminium and Boron are also not detectable in groundwater samples. Fe varies from 0.08 mg/l (GW 8) to 0.8 mg/l (GW 3). Total Alkalinity ranges from 6.0 mg/l (GW 6) to 29.0 mg/l (GW 8). Electrical conductivity values range from 59.4 (GW 8) to 61.2 (GW 4). Nickel, potassium, silica, and ammonia is not detectable in the study area

- d) **Noise study:** Project site (ANQ 6) at Rengalbeda village adjacent to NH-215 (Panikoili-Rajamunda) road due to heavy vehicle movements shows the highest values (day time) in October, November & December is 60 dB(A), 61.3 dB(A) & 62.9 dB(A) respectively. The Second highest values (day time) of Ambient Noise is observed in N4, located school area (Nilachal High school, Guali) which is situated Near NH- 215 (Panikoili- Rajamunda Road) due to heavy vehicle movements in October, November & December is 56.2 dB(A), 55.6 dB(A) & 57.3 dB(A) respectively. In night time maximum value observed in in October, November & December is 52.1 dB(A), 51.2 dB(A) & 51.4 dB(A) respectively at ANQ 6 location due to heavy vehicle movement activities
- e) **Soil quality:** Soil samples were collected and analysed to obtain results for 20 parameters Conductivity values ranges from 33.2 (SQ2) to 119.7 (SQ5)  $\mu$ S/cm. pH value is varies 5.62 (SQ6) to 7.94 (SQ5). This indicates that the soil is neutral and lies between optimum range for most plants. Fe value is varies from 33.9. (SQ1) to 5.67 (SQ4) Percent. Bulk density ranges from 1.11 (S2) to 1.25 (S6) gm/cc. Clay is presence in all locations due to deep weathering profile in the area ranging up to 30 m in some locales. Also, compaction of soil is moderate, and porosity is varies from 38.11 (SQ1) to 58.11 (SQ2) percent. SiO<sub>2</sub> is varies from 51.4 (SQ4) to 55.7 (SQ1) percent.

38. **Employment generation:** The estimated total manpower requirement for the mining project is 366 persons [direct employment 130 persons + indirect (Contractual) employment 236 persons]. Preference for employment will be given to the local villagers. Indirect employment opportunities will also arise for the local people.

Category	Post	Qualification	Departmental	Contractual	Total
Management	First Class Mines Manager	First Class Mines Manager's Certificate of Competency	1	-	1
	Second Class manager	Degree in Mining Engineering/ 2 <sup>nd</sup> class mines manager certificate of competency	3	3	6
	Geologist	M. Sc. In Geology/Applied Geology	3	-	3
Supervisory	Engineer	Foremen's Certificate of Competency	3	9	12
	Foreman	Mate's Certificate of Competency	3	6	9
	Surveyor	Surveyor's Certificate of Competency	2	2	4
	Blaster	Blaster's Certificate of Competency	4	-	4
Highly Skilled	HEMM Operator	Experienced with a valid license	10	120	130

	Clerical staff	Graduate and experienced	20	20	40
Skilled	Mining Mate	Experienced with a valid license	6	6	12
	Other Supporting Staffs	Experienced with a valid license	10	20	30
	Others	Experienced	15	30	45
Un-Skilled	Security	Experienced	50	20	70
Total			130	236	366

39. **Rehabilitation and Resettlement (R&R) Plan** - The people residing in the lease area will be rehabilitated as per the State Govt. guidelines and the socio-economic study has been carried out by the organization empanelled by Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar Odisha. As per the survey conducted by Nabakrushna Choudhury Centre of Development Studies (NCDS), 16 families (13 original families and 3 extended families) residing in the forest land within mining lease area will be displaced for the project and the assistance will be as per the provisions of RFCTLAR&R Act, 2013 and Odisha Resettlement & Rehabilitation Policy, 2006.

40. **Project cost:** Estimated cost of project is Rs. 3804.66 Lakhs. CER cost total approx. Rs. 100.45 Lakhs. EMP budget includes total Capital Cost of approx. Rs. 108 lakhs and Recurring Cost of Rs. 75.5 Lakhs.

Sl. No.	Category	Capital Cost (in Rs. Lakh)	Recurring Cost (in Rs. Lakh)
1.	Water Pollution & Rain water Harvesting	40.0	12.0
2.	Air Pollution Controlling	16.0	5.0
3.	Green Belt Development	17.00	4.5
4.	Environmental Monitoring	15.0	48
5.	Safety & Disaster Management Plan	20.0	6.0
Total		108.0	75.5

41. There are no court cases or violation cases pending against the PP.

42. The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Patia**, 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 Consultancy Services Pvt. Ltd., Patia**, along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- i) Entire land is forest land. Stage-I Forest Clearance is not obtained but applied for the same. Hence, present status of Forest Clearance.

- ii) "Silt and Desilting" management with silt composition and periodic desilting SOP to be submitted as it was a specific issue raised during public hearing.
- iii) Mitigation measures to prevent ground water pollution as there will be intersection in third year.
- iv) Tabulated form on different grades of ore, their utilisation/non utilisation, management and the quantity of waste generated and storage plan.
- v) Detailed note on explosive storage and blasting management and specific safety measures to be taken to avoid accidents as the National Highway is passing through the lease site.
- vi) Issues raised during public hearing and commitments of the proponent.
- vii) Minor minerals ore analysis of the lease site according to the IBM guidelines.
- viii) Detailed note on presence of Hexavalent Chromium, Manganese, Arsenic and all other heavy metals in the ground and surface water samples collected from the project area for EIA study.
- ix) High Tension Power Transmission Line is passing within lease area; same to be relocated outside lease area as proposed. An undertaking to this effect shall be submitted.
- x) A school is nearby; detailed SoP for safety of children of school due to transportation and blasting.
- xi) Number of villages nearby the mine.
- xii) Plan for water reuse / recycle for reducing water consumption for mining to be furnished.

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

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S AM SB INFRA PVT. LTD FOR COMMERCIAL CUM RESIDENTIAL APARTMENT BUILDING PROJECT OVER A BUILT-UP AREA 23844.03 SQ.M AT VILLAGE SUNDARPADA & EBARANGA, TEHSIL-BHUBANESWAR, DISTRICT-KHURDA OF SRI ASHIS MOHANTY - EC**

1. This proposal is for Environmental Clearance of M/s AM SB Infra Pvt. Ltd for Commercial Cum Residential Apartment Building Project over a built-up area 23844.03 sq.m at Village Sundarpada & Ebaranga, Tehsil-Bhubaneswar, District-Khurda of Sri Ashis Mohanty.
2. **Category:** The project falls under category "B" or activity 8 (a)-Building & Construction Project under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s AM SB Infra Pvt. Ltd. proposes a Commercial cum Residential Apartment building (B+G+7) at Bhubaneswar, Odisha.
4. The project site is located at plot no-698, khata no 796/705 of Sundarpada & plot no 628/1057, 629/917/1059, 629/1058, 628/4359, 629/4360, 629/917/4361, khata no 345/861, 345/2636 Mauja- Ebaranga, District- Khurda, Odisha.
5. The Plot area is 8791.52 m<sup>2</sup> (2.172 acre) and the total proposed built-up area is 23,844.03 m<sup>2</sup>.
6. The project comprises of the following facilities: Residential Dwelling Units 103 nos., Community Hall and Commercial Facilities.



7. **Location and connectivity:** The project site is located at Plot No 698, khata no 796/705 of Sundarpada & plot no 628/1057, 629/917/1059, 629/1058, 628/4359, 629/4360, 629/917/4361 khata no 345/861, 345/2636 Mauja-Ebaranga & Sundarpada , District- Khurda, Odisha. The geographical co-ordinates of project site are 20°13'08.78"N and 85°48'37.73"E bearing Toposheet No. 73H16. The Nearest Highway is NH-16 which is 4.2 km (NW), & NH-316 is 4.4 km towards SE direction away from project site. The nearest Railway Station being Sarkantra RS Railway Station is about 1.6 km (NW) away from the project site. Biju Patnaik International Airport is at 2 km (N) from project site.

**8. Statutory Clearances obtained/applied:**

- a) The proposed project falls under Bhubaneswar Municipal Corporation and building plan is approved by BDA vide letter no BNB/NOC/2022/030 dated 11.03.2022.
- b) Fire safety recommendation has been issued by Odisha Fire Service vide letter no RECOMM1204130062022000670 dated 29.06.2022.
- c) Permission for installation of power supply is issued by TPCODL vide letter no 7972 dated 30.11.2021.
- d) NOC for water supply and sewerage connection has been granted by PHD, Bhubaneswar vide letter no 13309 dated 22/08.2022.
- e) Application for Issue of NOC to Abstract Ground Water (NOCAP) is applied vide letter no 21-4/4894/OR/INF/2023 dated 01/04/2023

9. **Area Statement:** The total area of project site is 8791.52m<sup>2</sup> (2.172 acres). The details of building are as follows: -

S. No.	Description	Area (in m <sup>2</sup> )
1.	Plot area	8791.52
2.	Area Affected By Road	933.27
3.	Net plot area	7858.25
4.	Permissible Ground Coverage (@40% of plot area)	3143.3
5.	Proposed Ground Coverage (@ 38.59% of plot area)	3033.12
6.	Permissible FAR (@7 of plot area)	55,007.75
7.	Total Proposed FAR (@2.297 of net plot area)	18,057.03
8.	<b>Non-FAR Area</b>	<b>5787</b>
	• Basement Parking Area	5479.49
	• Basement Service Area	307.51
9.	<b>Total Built-up area (7+8)</b>	<b>23,844.03</b>
10.	Proposed Parking Area (@33.17% of FAR area)	5989.516
11.	Proposed Green Area (@20.36% of the net plot area)	1600
12.	Height of the tallest building (m)	24 m

10. **Water requirement:** During operational phase, total water requirement of the project is expected to be 92 KLD (54 KLD of fresh water and 38 KLD Recycled Water). Freshwater requirement will be met by ground water/bore wells.

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	<b>Domestic Water</b>						
	• Residents	515	90	45	46.35	23.175	<b>69.52</b>
	• Staff	172	25	20	4.3	3.44	<b>7.74</b>
	• Visitors	498	5	10	2.49	4.98	<b>7.47</b>
					<b>53 KLD</b>	<b>32 KLD</b>	<b>85 KLD</b>
<b>Total Domestic Water = 85 KLD</b>							
B.	Horticulture	1600 m <sup>2</sup>	4 l/sqm		<b>6 KLD</b>		
C.	Make up Water for Swimming pool				<b>1 KLD</b>		
<b>Grand Total (A+B+C) = 92 KLD</b>							

11. **Waste water Generation & Treatment:** Estimated Wastewater generation is 75 KLD and the same will be treated in STP of total 90 KL capacity. 38 KLD of treated wastewater will be recycled and reused for flushing and horticulture. Surplus treated water of 30 KLD in Non-Monsoon Period and 35 KLD in Monsoon Period will be discharged to external sewer.

<b>Domestic Water Requirement</b>	<b>85 KLD</b>
• Fresh	53 KLD
• Flushing	32 KLD
<b>Wastewater</b> [@80% fresh + 100% flushing]	42.4+ 32= <b>75 KLD</b>
STP Capacity (20 % higher than waste water)	90 KLD

12. **Rainwater harvesting:** It has been calculated to provide 6 rainwater harvesting tanks at selected locations, which will catch the maximum run-off from the site.

Area	Area (m <sup>2</sup> )	Coefficient of run-off	Peak hourly rainfall intensity (m)	Rain water harvesting potential/hour (m <sup>3</sup> /hr)
Roof-top area	3,130.58	0.95	0.140	416.367 m <sup>3</sup> /hr
<b>Total Runoff Load = 416.367 m<sup>3</sup>/hr</b>				
Taking 20 minutes retention time, total volume of storm water will be = 416.367/3			138.789 m <sup>3</sup> say 139 m <sup>3</sup>	
Storage capacity of 6 RWH tanks			25 X 6 = 150 m <sup>3</sup>	
<b>6 nos. of RWH tanks are proposed for rain water collection</b>				

13. **Power requirement:** The power supply will be through TP Central Odisha Distribution Limited (TPCODL). The total maximum demand is estimated as 930 kVA. There is provision of 2 nos. of DG sets total 570kVA (1 x 320 kVA + 1 x 250 kVA) capacity for power back up. The height of DG

stack is 28m. Solar based lighting is proposed in the landscape area, signage, entry gates and boundary walls etc., and LED lighting to save about 10% of total power requirement.

14. **Solid waste details:** About 386 Kg/day solid wastes will be generated in the project. The biodegradable waste 232 kg/day will be processed in OWC and the non-biodegradable waste generated 154 kg/day will be handed over to authorized local vendor. Horticultural Waste and STP sludge would be used as manure. Spent oil from DG sets will be disposed-off through approved recyclers.

S. No.	Description	Occupancy	Norms (kg/capita/day)	Waste Generated (kg/day)
a)	<b>Domestic Solid Waste</b>			
	• Residents	515	0.5	257.5
	• Staff (Maintenance, Commercial, Office)	172	0.25	43
	• Visitors (Maintenance, Commercial, Office)	498	0.15	74.7
b)	<b>Horticultural Waste</b> (0.395 acre)		@ 0.2 kg/acre/day	0.079
c)	<b>STP Sludge</b>		Wastewater x 0.35 x B.O.D difference/1000	10.5
<b>Total Solid Waste Generation = 386 kg/day</b>				

15. **Parking details:** Total Parking proposed is 193 ECS /5989.82m<sup>2</sup>. Parking required 5958.67m<sup>2</sup>. Parking proposed in Basement (171 ECS/5479.49sqm.), stilt (3 ECS/97.46sqm), surface (5 ECS/106.29sqm.) and Offstreet (14 ECS/306.58sqm).

16. **Green Belt:** Total green area measures 1600 m<sup>2</sup> i.e. 20.36% of the plot area. Evergreen tall and ornamental trees have been proposed to be planted inside the premises. No. of trees required = 1 tree/80 sq.m. of net plot area =7858.25/80 = 98.228 say 98 Nos. Total no. of trees proposed is 115 trees. The plantation matrix adopted for the green belt development includes pit of 0.3 m x 0.3 m size with a spacing of 2 m x 2 m. Peripheral plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt.

<b>Proposed Roadside &amp; Peripheral Plantation</b>		
S. No.	Botanical Name	Number
1	<i>Alstonia scholaris</i>	15
2	<i>Lagerstroemia Flosreginae</i>	25
3	<i>Azadirachta Indica</i>	23
4	<i>Mimusops Elengi</i>	15
5	<i>Tamarindus Indica</i>	15
6	<i>Syzygium Cumini</i>	10
7	<i>Mangifera Indica</i>	12
	<b>Total</b>	<b>115</b>

17. **Project cost:** The Total Cost (Land Cost + Development Cost) of the proposed project will be INR 53 Crores. EMP budget includes the capital cost for environmental management of the

proposed project is estimated to be Rs. 29.8 lakhs. Rs. 16.45 lakhs per year that will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

<b>COMPONENT</b>	<b>CAPITAL COST (INR LAKH)</b>	<b>RECURRING COST/YR (INR LAKH)</b>
Sewage Treatment Plant	9	2.25
Rain Water Harvesting System	9	2.25
Solid Waste Management	0.8	2.2
Environmental Monitoring	-	9
Green Area	1	0.25
Others (Energy saving devices, miscellaneous)	10	2.5
<b>TOTAL</b>	<b>29.8</b>	<b>16.45</b>

18. **Environment Consultant:** The Environment consultant **M/s Grass Roots Research & Creation India (P) Ltd., Noida, U.P.** 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 Grass Roots Research & Creation India (P) Ltd., Noida, U.P.** along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

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

- i) Land document and kism of land.
- ii) Tabulated form of parking space for residential, commercial and visitors.
- iii) Separate Entry and Exit gates for commercial and residential.
- iv) Certificate from DFO concerned that the site is not situated in Eco-Sensitive Zone of Chandaka- Dampara wildlife sanctuary.
- v) Detailed drainage plan, internal drainage details, drainage permission with supporting documents and NOC for drainage from concerned authority. Layout of drainage system and exact distance of project site to nearest drain and outfall of drain.
- vi) Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water.
- vii) Copy of approval for safety and structural stability from appropriate authority.
- viii) Status of NOC/permission letter from CGWAWR Deptt, Govt. of Odisha respectively for drawl of ground water.
- ix) Copy of approval letter from concerned authority for widening of existing govt. road.
- x) Layout plan and width of road for movement of Fire Tender.

- xi) Copy of fire recommendations.
- xii) Site layout w.r.t location of DG set and Stack including calculations of stack height and its connection layout plan beyond the height of building.
- xiii) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.

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

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

**ITEM NO. 05**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SUSTAINABLE MINING SERVICES FOR NARAGAON DECORATIVE STONE MINE OVER AN AREA 7.21 ACRES OR 2.918 HA. IN VILLAGE NARAGAON UNDER KUNDRA TAHASIL OF KORAPUT DISTRICT OF SRI ASHOK MOHAPATRA - EC**

1. This proposal for Environmental Clearance of M/s. Sustainable Mining Services for Naragaon Decorative Stone Mine over an area 7.21 acres or 2.918 ha. in village Naragaon under Kundra Tahasil of Koraput district of Sri Ashok Mohapatra.
2. **Category:** As per EIA notification 2006 and subsequent amendments, the proposed project is coming under B2 category and activity 1 (a) - Mining of Minerals.
3. The Mining Plan with Progressive Mine Closure Plan has been approved by Additional Director of Mines, O/o-Directorate of Mines, Odisha, Bhubaneswar vide letter no. MXXII-(b) 05/2022-5018 dated 09.06.2022.
4. Letter of Intent has been issued by Steel and Mines department vide letter no 1313 /SM-MC3-MC-0009-2021 S & M, Bhubaneswar dated 15.02.2022.
5. As per District Survey Report, Koraput (Under Ministry of Environment, Forest & Climate Change, New Delhi, Notification Date 15-01-2016.) Naragaon Decorative Stone Mines is listed in Sl.No.23 in the Mineral Concession list page no. 58.
6. The proposed land does not come under DLC and there are no mines within 500 metres of the project site as certified by Tahasildar, Kundra.
7. **Location and connectivity:** The granted M.L. area for decorative stone over 7.21 acres or 2.918 hectares is covered in the Survey of India Toposheet No. E 44 K5, and bounded by latitude N 18053'49.05" to N 18053'57.68" & Longitude E 82<sup>0</sup>23'53.11" to E 82<sup>0</sup>23'58.23". The

land use pattern of the mining lease area comes under the non forest agricultural land (Abada Ajogya Anabadi), bearing Khata no: 200, Plot no: 837/P. The applied Mining lease area over 7.21 acres or 2.918 hectares in village Naragaon, Under Kundra Tahasil of Koraput district, Odisha. M/s. Sustainable Mining Services for a period of 30 (thirty) years. Nearest railway stations is Khadapa Railway Station at an aerial distance of 12 Km. The lease area can be approached from SH:48 & NH:26 at a distance of 22 Km & 17 Km respectively. Nearest Airport is Bhubaneswar Airport which is at a distance of 388 Km. Nearest reserve forest is Judanga reserve forest which is 6km away from the project site.

8. **Topography:** The M.L. area under reference represents a hilly terrain with a small hillock. The highest and lowest elevations of the area are 624 mRL in the Northwestern part and 605 mRL in the Southeastern part of the M.L area respectively. Overall slope of the area is due South-east. There is no forest land in the M.L. area. The entire area falls in waste land under the revenue class of "Parbat" of Abada Ajogya Anabadi category.
9. **Life of mine:** Considering the production of Granite Gneiss@ 300Cum (Average) per annum, then the life of the mine will be =  $20034.900/300=66.80$  years.
10. **Total production and reserves:** The proposed quarry will be developed to produce 302 m<sup>3</sup> of decorative stone (Saleable) in the first year to fifth year of the current plan period. However, the proposed rate of production will be 5258m<sup>3</sup> of saleable decorative stone after the quarry is fully developed. As estimated, the geological reserves is 262500cum. Out of which the recoverable decorative stone @ 11.3% (cum) is 29662.500cum and mineable reserves is 177300cum. Out of which the recoverable decorative stone @ 19% (cum) is 20034.900cum.
11. **Mining method:** It has been proposed that the mining will be carried out in a systematic, scientific and sustainable manner by adopting semi mechanized open cast method of mining by exposed the spreading sheet. The mode of working will be Semi Mechanised, loading, hauling & transportations are the various mining operations those will be practiced in the Naragaon Decorative Mines. After drilling and blasting, excavation will be done mechanically by excavators & dumpers with the help of the common equipment like hand shovel, crowbar, hammer, pick axe etc. Loading will be done through the excavators by the help of dumpers. Breaking & sizing is done by hammering & Wire saw etc. Crowbars, Pickaxe, hammer etc. will be used for breaking of the ore. The height of the bench of the quarry will be kept 3m and width will be 3m wide or more than the height. Excavation work and loading will be carried out by mechanised means. Granite which that is to be excavated, will be stacked in the ore stack yard manually by head load. Waste materials will be transported to the proposed dumping site by tipper. The individual slope of benches will be 90° whereas the overall slope of the proposed quarry would be kept 45°. The gradient of the haul road will be maintained at 1:16 with more width than other benches for easy mobilization of workmen.
12. The ultimate extent and size of the quarry will be 120m x100m. Ultimate pit slope at the time of closure of mine will be around 45°.The ultimate pit will be reclaimed by means of back filling. Back filling will be done over an area of 0.729 hectares up-to 584 mRL and remaining dead benches will be fenced with barbed wire from safety point of view.
13. **Waste Generation and Management:** During the proposed plan period a total of 9078 m<sup>3</sup> of waste will generate due to course of mining. However about 40% of the generated waste will be

utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Therefore, a total of 3631.200 m<sup>3</sup> of waste will be utilized for construction and maintenance of roads and remaining waste will be dumped in the earmarked site over 0.141 Ha. During plan period, retaining wall and garland drain will be constructed for the proposed dump. In the 1st year programme, Construction of retaining wall of 100 m & garland drain of 105m will construct all around the waste dump.

14. **Water requirement:** Total water requirement for the project will be 5 KLD out of which 2 KLD will be required for drinking and domestic purpose and 1.5 KLD for dust suppression and 1.5 KLD for plantation purpose. Water will be sourced from the nearby villages through tanker.

15. **Power Requirement:** No electricity connection within ML area. However solar lights will be employed for day to day living purposes. Diesel requirement of 6000litters/month for operation of mining equipment and DG sets.

16. **Greenbelt:**

Year	Area (m <sup>2</sup> )	No. of saplings	Type of species	Location
1 <sup>st</sup> Year	200.00	40	Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo	Along the M.L. Boundary
2 <sup>nd</sup> Year	200.00	40		
3 <sup>rd</sup> Year	200.00	40		
4 <sup>th</sup> Year	200.00	40		
5 <sup>th</sup> Year	200.00	40		
<b>Total</b>	<b>1000.00</b>	<b>200</b>		

17. **Manpower:** A rough estimate reveals that a total of 22 nos. of administrative, technical persons, supervisory staffs, skilled and un-skilled workmen to carry out the mining and allied activities.

Sl. No	Description	No. of Persons
Administrative Staffs		
i)	Mines Manager (1st/2nd class certificate of Competency)	1
ii)	Geologist (Part Time)	1
iii)	Surveyor (Competency – Part Time)	1
iv)	Mechanical Engineer (Part Time)	1
Skilled Employees		
i)	Mining Mate	1
ii)	Quarry supervisor	1
iii)	Compressor Operator	1
iv)	Excavator Operator	1
v)	Jack Hammer Operator	2
vi)	LMV Driver	1
vii)	Water Tanker Operators	1
viii)	Tipper Operators	2
ix)	Excavator Helper	1
x)	Jack hammer helper	2

Semi-skilled Employees		
i)	Watchman	2
ii)	Office staff	2
iii)	Office Peon	1
	Total	22

18. **Project cost:** The approximate cost of the project comes around 200 lakhs. CSR budget of plan proposed for the project.

**Table: Details of CSR Activities & Its Budget**

Activities	Cost (Inr)	Village
Construction and Maintenance of approach road the mines (1.5 Km)	6,00,000.00	Naragaon
Maintenance of School building and furniture	1,00,000 per annum	Naragaon
Employment generation for the local people	--	Nearby villages
Free health checkup camp in Naragaon Village (Quaterly once) for 22 people	1,00,000 per annum	Naragaon,
Plantation along the road side of the approach road (250saplings)	60,000.00 per annum	Approach road ton Naragaon village and mines

**Table: EMP Capital cost**

Sl. No.	Particulars	Capital cost Lakh
<b>I.</b>	<b>Pollution Control</b>	
a)	Water Tanker	5.00
b)	Garland drains & retaining walls around the dump (m)	3.00
	Sub Total	8.00
<b>II.</b>	<b>Occupational Health</b>	
a)	Safety equipment	1.0
b)	Occupational health check up	1.0
	Sub Total	2.0
<b>III.</b>	<b>Green Belt</b>	1.0
<b>IV.</b>	<b>Miscellaneous</b>	0.5
	Grand Total	11.50

**Table: EMP Recurring cost**



Sl. No.	Particulars	Total cost (Lakh)
<b>I.</b>	<b>Pollution Control</b>	
1	Regular Water sprinkling in the dust prone areas	3.60
2	Maintenance of garland drain, settling tank & retaining wall	1.0
	Sub Total	4.6
<b>II.</b>	<b>Pollution Monitoring</b>	
1	Air pollution Monitoring	3.0
2	Water Pollution Monitoring	0.5
3	Noise monitoring	0.2
	Sub Total	3.7
<b>III.</b>	<b>Occupational Health</b>	
1	PPEs for workers	1.0
2	Regular health check ups	0.5
	Sub Total	1.5
<b>IV.</b>	<b>Green Belt</b>	0.5
<b>V.</b>	<b>Others (Expert Advice Etc.)</b>	0.5
	<b>Total</b>	<b>9.80</b>

19. **Environment Consultant:** The Environment consultant **M/s EHS360 Labs Private Limited, Chennai - 68** 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 EHS360 Labs Private Limited, Chennai -68** along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- i) Details of silt management be submitted.
- ii) Usage of surface run-off water and its management and find the possibility of SRTS installation if required.
- iii) Details of road connectivity layout and permission to be taken from the appropriate authority/private land owners for 50 meters road connectivity from proposed quarry site to nearest public road for transportation of minerals.
- iv) Detailed note on quantity of waste generation, storage, utilization and its management.
- v) Layout map showing the mining area, waste dump, settling area and waste backfilled in the area and balance storage.
- vi) Management plan for water and dust.
- vii) As per the KML file, dense vegetation is seen within the proposed site. Therefore, details of procedure to be followed for tree felling or transplantation of those trees within safety zone. Provision for compensatory afforestation must be done by equal number of plantation under consultation with forest deptt.

- viii) Certificate from the concerned mining officer that no other mines located within 500 meter from the periphery of the lease boundary.
- ix) As per the provisions stipulated in OM F.No.22-34/2018-IA.III dated 16th January 2020, MOEFCC, Government of India for the stone mining projects, the mining lease holder to undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.

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

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SUSTAINABLE MINING SERVICES FOR NARAGAON DECORATIVE STONE MINE OVER AN AREA 9.35 ACRES OR 3.785 HA. IN VILLAGE NARAGAON UNDER KUNDRA TAHASIL OF KORAPUT DISTRICT OF SRI ASHOK MOHAPATRA - EC**

1. This proposal is for Environmental Clearance of M/s. Sustainable Mining Services for Naragaon Decorative Stone Mine over an area 9.35 acres or 3.785 ha. in village Naragaon under Kundra Tahasil of Koraput district of Sri Ashok Mohapatra.
2. **Category:** This project falls under Category “B2” under Schedule of Item 1(a) - Mining of Minerals as per the EIA Notification, 2006 and its amendments thereof.
3. The applied Mining lease area over 9.35 acres or 3.785 hectares in village Naragaon, under Kundra Tahasil of Koraput district, Odisha. M/s. Sustainable Mining Services for a period of 30 (twenty) years. The tenure of the lease period is scheduled to expire on 08.06.2052.
4. The Mining Plan with Progressive Mine Closure Plan has been approved by Additional Director of Mines, O/o-Directorate of Mines, Odisha, Bhubaneswar vide letter no. MXXII-(b)04/2022-5025 dated 09.06.2022.
5. Letter of Intent has been issued by Steel and Mines department vide letter no 1309 /SM-MC3-MC-0009-2021 S & M Bhubaneswar, dated 15.02.2022.
6. **Location and connectivity:** The land use pattern of the mining lease area comes under the non-forest agricultural land (Abada Ajogya Anabadi), bearing Khata no: 200, Plot no 989/P . The applied Mining lease area over 9.35 acres or 3.785 hectares in village Naragaon, Under Kundra Tahasil of Koraput district, Odisha. The area of mining lease area is in the Survey of India. Toposheet No. E44K5, and bounded by latitude N18<sup>0</sup> 53'38.79” to N18<sup>0</sup> 53'50.78”& Longitude E820 24'09.60” to E820 24'17.71”. Nearest railway stations is Khadapa Railway Station at an aerial distance of 12 Km. The lease area can be approached from SH - 48 & NH - 26 at a distance of 22 Km & 17 Km respectively. Nearest Airport is Bhubaneswar Airport which is at a distance of 388 Km. Nearest reserve forest is Judanga reserve forest which is 6km away from the project site.
7. **Topography:** The M.L. area under reference represents a hilly terrain with a small hillock. The highest and lowest elevations of the area are 610 mRL in the Northwestern part and 600 mRL in the South-eastern part of the M.L area respectively. Overall slope of the area is due South-east. There is no forest land in the M.L. area. The entire area falls in waste land under the revenue class of “Parbat” of Abada Ajogya Anabadi category.

8. **Reserves and total production:** As estimated, the geological reserves is 287150cum. Out of which the recoverable decorative stone @ 11.3% (cum) is 32447.950cum and mineable reserves is 185900cum. Out of which the recoverable decorative stone @ 19% (cum) is 21006.700cum. The proposed quarry will be developed to produce 4550 m<sup>3</sup> of decorative stone (Saleable) in the first year to fifth year of the current plan period. However, the proposed rate of production will be 13650m<sup>3</sup> of saleable decorative stone after the quarry is fully developed.

Year	Volume of Rocks	Volume of Presently Non Saleable Materials	Volume of Blocks	Volume of Waste
1st Year	1750	175	192.50	1382.50
2nd Year	2400	240	264.00	1896.00
3rd Year	3250	325	357.50	2567.50
4th Year	3250	325	357.50	2567.50
5thYear	4550	455	500.50	3594.50
Total	13650	1520	1672.00	12008.00

9. **Mining method:** It has been proposed that the mining will be carried out in a systematic, scientific and sustainable manner by adopting semi mechanized open cast method of mining by exposed the spreading sheet. The mode of working will be Semi Mechanised, loading, hauling & transportations are the various mining operations those will be practiced in the Naragaon Decorative Mines. After drilling and blasting, excavation will be done mechanically by excavators & dumpers with the help of the common equipments like hand shovel, crowbar, hammer, pick axe etc. Loading will be done through the excavators by the help of dumpers. Breaking & sizing is done by hammering & Wire saw etc. Crowbars, Pickaxe, hammer etc. will be used for breaking of the ore. The height of the bench of the quarry will be kept 3m and width will be 3m wide or more than the height. Excavation work and loading will be carried out by mechanised means. Granite which that is to be excavated, will be stacked in the ore stack yard manually by head load. Waste materials will be transported to the proposed dumping site by tipper. The individual slope of benches will be 90° whereas the overall slope of the proposed quarry would be kept 45°.

10. **Waste Generation and management:** During the proposed plan period a total of 12008 m<sup>3</sup> of waste will generate due to course of mining. However about 40% of the generated waste will be utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Therefore, a total of 1493.00 m<sup>3</sup> of waste will be utilized for construction and maintenance of roads and remaining 2240.00 m<sup>3</sup> of waste will be dumped in the earmarked site over 0.141 Ha. area.

11. **Water requirement:** Total water requirement for the project will be 5 KLD out of which 2 KLD will be required for drinking and domestic purpose and 1.5 KLD for dust suppression and 1.5 KLD for plantation purpose. Water will be sourced from the nearby villages through tanker.

12. **Power Requirement:** No electricity connection within ML area. However solar lights will be employed for day to day living purposes. Diesel requirement of 6000liters/month for operation of mining equipment and DG sets.

13. **Greenbelt:** Eucalyptus etc. are proposed to be planted with a minimum spacing of 2m between two consecutive plants.

Year	Area (m <sup>2</sup> )	No. of saplings	Type of species	Location
1 <sup>st</sup> Year	200.00	40	Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo	Along the M.L. Boundary
2 <sup>nd</sup> Year	200.00	40		
3 <sup>rd</sup> Year	200.00	40		
4 <sup>th</sup> Year	200.00	40		
5 <sup>th</sup> Year	200.00	40		
Total	1000.00	200		

14. **Manpower:** A rough estimate reveals that a total of 22 nos. of administrative, technical persons, supervisory staffs, skilled and un-skilled workmen to carry out the mining and allied activities.

Sl. No	Description	No. of Persons
<b>Administrative Staffs</b>		
1	Mines Manager (1st/2nd class certificate of Competency)	1
2	Geologist (Part Time)	1
3	Surveyor (Competency – Part Time)	1
4	Mechanical Engineer (Part Time)	1
<b>Skilled Employees</b>		
5	Mining Mate	1
5	Quarry supervisor	1
6	Compressor Operator	1
7	Excavator Operator	1
9	Jack Hammer Operator	2
10	LMV Driver	1
11	Water Tanker Operators	1
12	Tipper Operators	2
13	Excavator Helper	1
14	Jack hammer helper	2
<b>Semi-skilled Employees</b>		
15	Watchman	2
16	Office staff	2
17	Office Peon	1
	<b>Total</b>	<b>22</b>

15. **Project cost:** The approximate cost of the project comes around 105 lakhs. CSR budget is 8.6 lakhs. EMP capital cost of the project is 11.5 Lakh and EMP Recurring cost is 9.8 Lakh/Annum.

**Table: EMP Capital cost**

Sl. No.	Particulars	Capital cost Lakh
<b>I.</b>	<b>Pollution Control</b>	
1	Water Tanker	5.00
2	Garland drains & retaining walls around the dump (m)	3.00
	Sub Total	8.00
<b>II.</b>	<b>Occupational Health</b>	
1	Safety equipment	1.0

2	Occupational health check up	1.0
	Sub Total	2.0
<b>III.</b>	<b>Green Belt</b>	1.0
<b>IV.</b>	<b>Miscellaneous</b>	0.5
	<b>Grand Total</b>	<b>11.50</b>

**Table: EMP Recurring cost**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Total cost (Lakh)</b>
<b>I.</b>	<b>Pollution Control</b>	
a)	Regular Water sprinkling in the dust prone areas	3.60
b)	Maintenance of garland drain, settling tank & retaining wall	1.0
	<b>Sub Total</b>	<b>4.6</b>
<b>II.</b>	<b>Pollution Monitoring</b>	
a)	Air pollution Monitoring	3.0
b)	Water Pollution Monitoring	0.5
c)	Noise monitoring	0.2
	Sub Total	3.7
<b>III.</b>	<b>Occupational Health</b>	
a)	PPEs for workers	1.0
b)	Regular health check ups	0.5
	Sub Total	1.5
<b>IV.</b>	<b>Green Belt</b>	0.5
<b>V.</b>	<b>Others (Expert Advice Etc.)</b>	0.5
	<b>Total</b>	<b>9.80</b>

16. **Environment Consultant:** The Environment consultant **M/s EHS360 Labs Private Limited, Chennai**, 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 EHS360 Labs Private Limited, Chennai**, along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- i) Details of silt management be submitted.
- ii) Usage of surface run-off water and its management and find the possibility of SRTS installation if required.
- iii) Details of road connectivity layout and permission to be taken from the appropriate authority/private land owners from proposed quarry site to nearest public road for transportation of minerals.
- iv) Detailed note on quantity of waste generation, storage, utilization and its management.
- v) Layout map showing the mining area, waste dump, settling area and waste backfilled in the area and balance storage.
- vi) Management plan for water and dust.

- vii) Certificate from the concerned mining officer that no other mines located within 500 meter from the periphery of the lease boundary.
- viii) As per the provisions stipulated in OM F.No.22-34/2018-IA.III dated 16th January 2020, MOEFCC, Government of India for the stone mining projects, the mining lease holder to undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.

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

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF PURUTIGUDA SAND QUARRY OVER AN AREA OF 13.688 ACRES OR 5.539 HA. HAVING KHATA NO.512, PLOT NO. 1285 IN VILLAGE PURUTIGUDA UNDER KASHINAGAR TAHASIL OF GAJAPATI DISTRICT OF SRI BANSIDHAR SWAIN – EC**

The SEAC decided to defer the proposal to next SEAC meeting since Environment consultant, **M/s Green Circle, Inc., Gujarat** along with the project proponent were not able to communicate properly regarding the details of the proposal as well as no Replenishment Study Report was submitted.

#### **ITEM NO. 08**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF TURKANIGUDA SAND BED OVER AN AREA OF 5.058 HA. / 12.50 ACRE LOCATED AT VILLAGE- TURKANIGUDA, TAHASIL- GUNUPUR, DISTRICT – RAYAGADA OF TAHSILDAR GUNUPUR - EC**

1. This proposal for Environmental Clearance of Turkaniguda Sand Bed over an area of 5.058 Ha. / 12.50 acre located At Village- Turkaniguda, Tahasil- Gunupur, District – Rayagada of Tahsildar Gunupur.
2. **Category:** As per EIA Notification, 2006 and its subsequent amendments, this proposed project falls under B1 category in activity 1(a)-Mining of Minerals.
3. The mining lease has been granted for & on behalf of Tahasildar Gunupur vide letter no – 2177 on dated 09.07.2020 for long term basis (5 years).
4. The mining lease has been approved by joint director of Geology Zonal Survey, Koraput vide letter no – 2401 on dated 03.09.2020 for long term basis (5 years).
5. **TOR details:** Terms of Reference (TORs) has been granted by SEIAA, Odisha prescribed the Reference No: 3665/SEIAA dated 27- 12-2021.
6. **Public hearing details:** Public hearing was successfully executed on date 14.09.2022 in the Town Hall, Gunupur under Gunupur Municipality in Rayagada District as per the guidelines given in EIA Notification 14th September' 2006 and its subsequent amendment. Issues raised during public hearing plantation, road development, peripheral development, environmental protection, dust suppression measure, sand transportation and sand mining from river bed. Budget for Corporate Environmental Responsibility (CER) is Rs 1,20,000.
7. **Location and connectivity:** The mine lease area is in Village – Turkaniguda, Tehsil – Gunupur, District – Rayagada, is on Khata no- 68, Plot no- 339/A of Bansadhara river covered in the Survey of India Topo Sheet No – E44F16 and is bounded between the Latitude - 19° 03' 24.76"

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**Environmental Scientist, SEAC**

N to 19° 03' 34.79" N and Longitude – 83° 47' 10.28" E to 83° 47' 16.68". Nearest Railway Station is Gunupur Railway Station, approx 2.8 km towards NE direction. Nearest Airport is Bhuwaneshwar Airport, approx 255 km towards ENE direction. Nearest Highway: is SH-4, approx 2.8 km in NE direction.

8. **Topography and drainage:** The topography of the area is more or less flat with highest elevation of 80-81m RL. The lease area here is a river sand quarry. Drainage system in the region is dendritic. General flow direction of Bansadhara River is from North to South. Work will continue only during summer months when there is no water in the leasehold. Mining will be restricted to a 1.0m depth.
9. **Total production and reserves:** The production is proposed to be 25,100 cum/year and 1,25,500 cum is the total production during the plan period. As estimated, geological reserve and mineable reserve is 50,580cum and 44,040cum respectively.

Year	Vol. of Sand in (cum)
1st	25,100
2nd	25,100
3rd	25,100
4th	25,100
5th	25,100
<b>Total</b>	<b>1,25,500</b>

10. **Replenishment study:** For the said project replenishment study has been done by UAV/Drone survey (volumetric survey) method. Pre-monsoon Survey was carried out on 10.05.2022 and Post- monsoon Survey was carried out on 25.11.2022. The volume of sand available after post monsoon is around 25821.8 m<sup>3</sup>, which can be treated as safe extractable within the framework of the study after arrival of river level as it was in pre-monsoon. Further volume of sand also computed which can be extracted as on date (Pre-monsoon survey date) is 38540 m<sup>3</sup>. As it is a new mine no excavation has done in this year. So, total minable reserve available for mining is 44040 + 25821.8 = 69861.8 m<sup>3</sup> whereas, approved production capacity for the year is 25,100 m<sup>3</sup>.
11. **Method of mining:** The sand will be excavated by open cast manual method. Since the depth of mining is 1.0 m, excavator, handpicks, spade, hand shovel will be used by laborers for extracting & loading of sand. The maximum depth of mining will be 1.0 m. The mine will be developed in North direction. At the end of plan period the quarry floor will be 179 m RL.
12. **Water requirement:** Water requirement for workers for drinking purpose will be around 0.21 KLD & the total water requirement will be around 2.0 KLD.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lpcd per labor 10*21/1000= 0.21 KLD	0.21
Dust Suppression	Total approach road to be water sprinkled = 100 m 100 m*6m*0.5 *2 times/1000= 0.60 KLD	0.60

Plantation	506 plant (during plan period) @ 2 L/per plant= 506*2lts= 1012/1000= 1.012 KLD	1.012
Total		1.822 ~ 2.0

13. **Greenbelt:** The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains. About 506 number of trees will be planted along approach road & in village during the first year. Plantation will be done with suitable local species like Teak, Mango, Neem, Jammun, Jhaun etc after consultation with the local authorities.

Year	No of plants along both side of approach road	No. of plants in buffer zone consulting local authorities	Total Plantation
1 <sup>st</sup>	100	406	506
2 <sup>nd</sup>	Maintenance	Maintenance	Maintenance
3 <sup>rd</sup>			
4 <sup>th</sup>			
5 <sup>th</sup>			
Total	100	406	506

14. **Baseline summary:** Baseline monitoring was carried out for various parameters for a study period of 3 months (October, 2021 to December, 2021).

- a) Air quality: Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM10 for all the 8 AQ monitoring stations were found to be 57.59 µg/m<sup>3</sup> at AQ2 and 87.39 µg/m<sup>3</sup> at AQ1, respectively. The minimum & maximum concentrations of PM2.5 were found to be 23.03 µg/m<sup>3</sup> at AQ2 and 47.17 µg/m<sup>3</sup> at AQ1, respectively. As far as the gaseous pollutants SO<sub>2</sub> and NO<sub>x</sub> are concerned, the prescribed CPCB limit of 80µg/m<sup>3</sup> for residential and rural areas has never surpassed at any station. The minimum & maximum concentrations of SO<sub>2</sub> were found to be 5.41 µg/m<sup>3</sup> at AQ4 & 16.91 µg/m<sup>3</sup> at AQ7, respectively. The minimum & maximum concentrations of NO<sub>x</sub> were found to be 9.24 µg/m<sup>3</sup> at AQ2 & 24.9 µg/m<sup>3</sup> at AQ1, respectively.
- b) Ground water: Analysis results of ground water reveal that pH varies from 7.20 at GW1 to 7.67 at GW5 during study period. Total hardness varies from 247 mg/l at GW2 to 284 mg/l at GW1 during study period. Total dissolved solids vary from 332 mg/l at GW3 to 367 mg/l at GW2 during study period.
- c) Surface water: The analysis results of surface water indicate that the pH ranges between 7.34 and 7.91. Dissolved Oxygen (DO) was observed in the range of 6.6 to 6.9 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 4.0 – 4.2 mg/l. The chlorides and Sulphates were found to be in the range. Based on the results it is evident that most of the parameters of the samples comply with 'Category 'B' standards of CPCB indicating their suitability for Drinking water source after conventional treatment and disinfection.



- d) Soil study: Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.17 to 7.62, which shows that the soil is alkaline in nature. Potassium is found to be from 51.82 mg/kg to 60.20 mg/kg. The water holding capacity is found in between 28.45 % to 32.18 %.
- e) Noise study: Noise monitoring reveals that the minimum & maximum noise levels at day time were recorded as 42.25 Leq. dB (A) at NQ5 & 61.13 dB (A) at NQ1, respectively. The minimum & maximum noise levels at night time were found to be 33.81 dB (A) at NQ5 to 51.65 dB (A) at NQ1. There are several other sources in the 10 km radius of study area, which contributes to the local noise level of the area. Traffic activities as well as activities in nearby villages and agricultural fields add to the ambient noise level of the area.

15. **Manpower requirement:** A total of 21 nos. of manpower are to be employed in the lease area for mining 25,100 cum/year of sand. Indirect employment through creation of shops/stalls, hired vehicles, etc. also can be generated to full fill the day to day requirements of the mining personnel's.

16. **Project cost:** The estimated cost of project is around Rs. 60 Lakhs. Budget for Corporate Environmental Responsibility (CER) is Rs 1,20,000 and, budget for Occupational Health is Rs.2,21,000. Budget allotted for the Environmental Management Plan includes capital cost of Rs.1,26,200 and recurring cost of Rs.3,32,400

**Table: CER budget**

Sl. No.	Activity	Capital Cost (in Rs.)/annum
a)	Financial aid for medical camp in Turkaniguda village. @ Rs. 20,000/ camp (2 camp in a year)	40,000
b)	Distribution of books & educational kits to the student of Turkaniguda village	30,000
c)	Skill development program camps like computer learning, sewing etc. in Turkaniguda village. @Rs 25,000/trainer (2 trainer)	50,000
TOTAL		1,20,000

**Table: Environmental Management Plan Budget**

Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
a)	Pollution Control Dust Suppression /Water Sprinkling	--	50,000
b)	Pollution Monitoring		
	i) Air pollution		50,000
	ii) Water pollution	--	40,000
	iii) Soil Pollution		20,000
	iv) Noise Pollution		10,000
c)	Green belt development	1,01,200	1,00,000

d)	Maintenance of haul road	25,000	62,400
Total		1,26,200	3,32,400

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

Considering the information furnished and the presentation made by the consultant, **M/s P And M Solution, Noida**, along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- i) In the public hearing, most of the public opposed the proposed mining activity. Revised action plan as there are no commitments taken up in action plan according to the public hearing demands.
- ii) KML file shows lease area surrounded by water. Transportation route from proposed quarry to public road along with layout map with permission/NOC from the concerned authority for the same to be submitted.
- iii) Cluster certificate from concerned Tahasildar.

#### **ITEM NO. 09**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF JAHADA SAND QUARRY OVER AN AREA OF 18.788 ACRES/7.603 HA. AT VILLAGE JAHADA OF TAHASIL-DHARAKOTE IN DISTRICT GANJAM OF SRI KESHARAO DORA - EC**

1. This proposal is for Environmental Clearance of Jahada Sand Quarry over an area of 18.788 acres/7.603 ha. At Village Jahada of Tahasil-Dharakote in District Ganjam of Sri Kesharao Dora.
2. **Category:** The Ministry of Environment, Forests & Climate Change, Govt. of India, through its EIA Notification of 14th September' 2006 and its subsequent amendment on dated 1<sup>st</sup> December' 2009 and 04.04.2011 under the Environment Protection Act, 1986, the project is categorized in Category-B1 of Schedule under item 1(a)-Mining of Minerals.
3. The mining lease granted by Tahasildar, Dharakote, Ganjam has been auctioned and leased out to the successful bidder Sri Keshrao Dora, S/o-Duryodhan Dora, At/ P.O-Janibilli, P.S.-Dharakote, Dist – Ganjam after obtaining statutory clearances vide letter no 1299 dated 19.04.2022. The mining lease will be granted on for long term basis for 5 years and the lease period will start from the date of registration of executed lease deed.
4. The Mining plan has been approved by the Deputy Director of Geology (Authorized Officer), O/o The Joint Director of Geology (S.Z), Berhampur vide memo no – 592/SZ on dated 02.05.2022.
5. The mining lease area is listed as an identified sand minor mineral in Page – 93, Serial no 5, in DSR of the Ganjam district.
6. **TOR details:** Terms of Reference (ToRs) Letter for the Jahada Sand Bed has been obtained in favour of Tahasildar, Dharakote vide letter no – 5193/SEIAA on dated 19.08.2022.

Proceedings of the SEAC meeting held on 03.05.2023

**Environmental Scientist, SEAC**

7. **Public hearing details:** The public hearing in respect of the above project was held on 05.01.2023 as per schedule and the venue in accordance with the EIA notification S.O.1533 (E) dt.14.09.2006. Issues raised during public hearing are Air Pollution Control (water sprinkling, plantation in nearby school and roads), employment to locals, health care (health camp, blood donation camp etc in nearby village namely Jahada), drinking water (installation of RO plant to nearby village) and maintenance of roads. Total budget incurred for action plan of public hearing issues is Rs. 3,50,000.
8. **Location and connectivity:** The Jahada Sand quarry is on Khata no- 861, Plot no – 5680 & 5681 of Kissam Nadi at village Jahada in Dharakote Tahasil in Ganjam District of Odisha. The area under discussion is featured in Survey of India Topo Sheet No – E45A10 and is bounded between the Latitude -19° 40' 41.98" N to 19° 40' 51.90" N and Longitude – 84° 33' 37.19" E to 84° 33' 53.23" E. The lease area is located at a distance of 0.7km from village Jahada and at a distance of 4.5 kms from Dharakote, 56 kms from the District Headquarters Ganjam and 150 kms from the State Capital Bhubaneswar. Berhampur railway station is the nearest railway station located at a distance of 49 kms from the lease area. Nearest Road Bridge-Nandighora is at a distance of 2.7km from the mining lease area. Metal road connecting to the lease area and is at distance of 0.28 km. SH – 36 is at 11.5 km and it is the nearest major district road. NH- 59 is the nearest National Highway which is at a distance of 0.61km.
9. There is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/ Elephant Reserves (existing) is situated within 10km of the mining lease area.
10. **Replenishment study:** The volume of sand available after post monsoon is around 27760.2 m<sup>3</sup> , which can be treated as safe extractable within the framework of the study after arrival of river level as it was in pre monsoon. Further volume of sand also computed, which can be extracted as on date (during mining plan preparation) is 35590m<sup>3</sup>. As it is a new mine no excavation has done in this year. So, total minable reserve available for mining is 35590 + 27760.2 = 63350.2 m<sup>3</sup> whereas, approved production capacity for the year is 11,000 m<sup>3</sup>.
11. **Total production and reserves:** The average production is proposed to be 11000cum/year and 55000 cum is the total production during the plan period. As estimated, geological and mineable reserve of the proposed project is 46452cum and 35590cum respectively. Extractable mineable reserve is 21354 cum.
12. **Mining method:** The mining is done by manual mining method using spade axe and hand picks. Transportation will be done by Tippers/Tractors. No benching will be necessary. One quarry with a depth of 1.0 m will be developed. The development for the ensuring five years period has been proposed in the river sand within the lease area. The floor level at the end of the five-year plan period of the concession will be 55 m RL.
13. **Water requirement:** Water requirement for the project will be 3.0 KLD. Water required in the project will be for drinking purpose and dust suppression, which will be sourced from water tanker.
14. **Power Requirement:** Power will not be required for operations as the mining will be worked out during day time only. Minimal power required for office shall be taken from the General Electric supply of the area.

15. **Greenbelt:** Plantation will be done on the bank of the river. 250 plants are to be planted on the river bank to protect the river bank side from erosion & protection of the environment. Sapling of trees like Banyan, Peepal, Mahaneem, Arjun Kadamba, Mango, Jackfruit, Jamun, Kendu, Nim etc to be planted.
16. **Manpower requirement:** Employment Generation from the project is 23 nos. of people. Indirect employment through creation of shops/ stalls, hired vehicles, etc. also, can be generated to full fill the day-to-day requirements of the mining personals.
17. **Baseline summary:** Baseline study has been collected for Pre monsoon season, March 2022 to May 2022.
- Soil Status:** It has been observed that the pH of the soil in the study area ranged from 7.43 to 8.06. The electrical conductivity was observed to be in the range of 340.33  $\mu\text{mhos/cm}$  to 380.1  $\mu\text{mhos/cm}$ . The total nitrogen values range between 104.2 to 175.8 mg/kg. The phosphorus values range between 41.4 to 54.95 mg/kg, indicating that the phosphorus content in the study area falls in less to medium category. The potassium values range between 182.5 – 222.7 mg/kg.
  - Surface Water:** The analysis results indicate that pH and total coliform of the Surface water was found to be in range of 7.5 – 8.2 and 232 - 340 MPN/100ml.
  - Ground Water:** The analysis results of ground water samples showed the pH in range of 6.84-7.82 which are with the specified standard limits of 6.5 to 8.5. Color and turbidity of the samples < 5.0 Hazens and <1.0 NTU respectively. The total hardness of the samples ranged from 240.2 mg/l – 292.3 mg/l. Calcium and magnesium concentrations ranged from 53.35 mg/l -68.9 mg/l and 30.40 mg/l –45.39 mg/l respectively. The total dissolved solids of the samples ranged from 550.9 mg/l – 724.3 mg/l. The TDS values are within the stipulated 2000 mg/l. Range of chlorides and sulphates concentrations ranges from 106.9 mg/l- 147.8 mg/l and 38.4 mg/l – 51.8 mg/l respectively. Fluoride concentration ranged from 0.28 mg/l – 0.42mg/l and is found to be within the permissible limits. Iron concentrations in ground water varied from 1.06-1.28 mg/l. Zinc levels varied from 0.53-0.80 mg/l respectively. Aluminium concentration in ground water is <0.02 mg/l at all locations.
  - Air quality:** The maximum value for PM10 observed at Project Site location 71.4  $\mu\text{g/m}^3$  and minimum value for PM10 observed at Kharigurha Village 45.1  $\mu\text{g/m}^3$ . The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 100  $\mu\text{g/m}^3$ . The maximum value for PM2.5 observed at Project Site location 45  $\mu\text{g/m}^3$  and minimum value for PM2.5 observed at Kharigurha Village 26.5  $\mu\text{g/m}^3$ . The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 60  $\mu\text{g/m}^3$ . The maximum value for SO2 observed at Project Site location 11.5  $\mu\text{g/m}^3$  and minimum value for SO2 observed at Haripur Village 5.1  $\mu\text{g/m}^3$ . The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80  $\mu\text{g/m}^3$ . The maximum value for NO2 observed at Project Site location 20.0  $\mu\text{g/m}^3$  and minimum value for NO2 observed at Haripur Village 7.4  $\mu\text{g/m}^3$ . The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80  $\mu\text{g/m}^3$ . The maximum value for CO observed at Project Site location

1.27 mg/m<sup>3</sup> and minimum value for CO observed at Haripur Village 0.32 mg/m<sup>3</sup>. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 4 mg/m<sup>3</sup>.

- e) **Noise study:** The daytime (Leq day) noise levels are observed to be in the range of 44.7 –54.8 dB(A) which are within the prescribed limit of 55 dB(A). The maximum noise level of 54.8 dB (A) was observed at Kapilash mine site and the minimum noise level of 44.7 dB(A) was observed at Village Sasapur during the study period. It is observed that the day time noise levels are in accordance to the prescribed limit of 55 dB (A). The nighttime (Leq night) Noise levels are observed to be in the range of 33.2 – 44.6 dB(A) Which are within the prescribed limit of 45 dB(A). The maximum noise level of 44.6 dB (A) was observed at Kapilash mine site and the minimum noise level of 33.2 dB (A) at Village Haripur during the study period. It has been found that the night time noise levels are in accordance to the prescribed limit of 45 dB (A).


18. **Project cost:** Estimated project cost of the proposed project is 50.0 Lakhs. EMP cost budget includes capital cost Rs. 4,70,000/-of and recurring cost of Rs. 2,35,000.

S. No.	Description	Capital Cost (Rs.)	Recurring Cost (Rs.)
a)	Air pollution Control: Dust Suppression/ Water Sprinkling	30,000	1,00,000
b)	Road Maintenance	50,000	60,000
c)	Greenbelt	40,000	25,000
d)	Personal Protective Equipment	-	20,000
e)	Environmental monitoring	-	30,000
f)	Addressal of Public Hearing issues	3,50,000	-
<b>Total</b>		4,70,000/-	2,35,000

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

Considering the information furnished and the presentation made by the consultant, **M/s Parivesh Environmental Engineering Services, Lucknow**, along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- i) Copy of Environmental Clearance granted earlier and compliance report to previous EC conditions, as it is an existing quarry from period 2016-17 to 2020-21 as per DSR.

  
**Member Secretary, SEAC**