

MINUTES OF THE 134TH MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), JHARKHAND HELD ON 23RD, 24TH, 25TH, 26TH AND 27TH AUGUST, 2026.

The 134th meeting of State Level Expert Appraisal Committee (SEAC), Jharkhand was held on 23rd, 24th, 25th, 26th and 27th August, 2026 under the Chairmanship of Shri Ashok Kumar Singh, IFS (Retd.) in the Conference Room at SEAC, Ranchi.

The following members were present:

1. Shri Ashok Kumar Singh, IFS (Retd.) - Chairman
2. Shri Niranjana Lal Agarwalla - Member
3. Dr. Raju Kumar - Member
4. Shri Ashok Kumar Dubey, IFS (Retd.) - Member (Not present)
5. Dr. Ajay Govind Bhatt - Member
6. Shri Srikant Verma, IFS - Member Secretary

The various projects applied in SEAC for the technical appraisal after the last SEAC meeting held on 08th, 09th, 10th, 11th and 12th July, 2026. These projects have been put up for discussions. Besides, these Projects, wherein PP's were asked to provide requisite information / clarifications in the earlier meeting of SEAC, were also considered for appraisal. The Project Proponents have been asked to make technical presentation for the appraisal of their projects before the committee.

The following observations /recommendations were made during the presentation (Project-wise), as under :-

Day 1 : 23rd August, 2026 [Sunday]

A. Matter referred by SEIAA, Jharkhand

- i. Letter F. no. IA-Z-12011/22/2026-IA-I, dated 15.07.2026 from Ministry of Environment, Forest & Climate Change, Govt. of India regarding Public Grievance (PG) Ref. No. MOEAF/E/2026/0000630, dated 06.02.2026 received in the Ministry from Md. Khalil Ansari.

This matter is related to Dongodih Stone Deposit of Shri Sharwan Yadav, Village : Dongodih, Tehsil : Jamua, Distt. : Giridih, Jharkhand (0.931 Ha).

This matter was considered in the 133rd meeting of SEAC held on 08th, 09th, 10th, 11th and 12th July, 2026.

A letter has been issued by Member Secretary, SEAC to Shri Sharwan Yadav vide letter no. 89, dated 20.08.2026 with direction to provide the Action Taken Report (ATR) in compliance of Certified Compliance Report (CCR) issued by Regional Office, Ranchi, MoEF&CC, Govt. of India vide letter no. F.No. 111-31/ROR-2026/314, dated 12.06.2026.

The Project Authority has been asked to provide a reply within 15 days of the receipt of the above letter failing which suitable action may be taken.

Accordingly, this matter will be taken up after completion of the above period in the next meeting of SEAC.

- ii. E-mail dated 17.07.2026 from Shri Nitesh Kumar, Chief Administrative Office, P & M Hi-Tech City Centre Mall regarding non-acceptance of completed Gausala development work under the Community Development and Natural Augmentation Plan pursuant to Environmental Clearance.

As per EC letter no. EC/SEIAA/2021-22/2510/2021/33, dated 12.04.2023 the following Remediation Plan and Natural & Community Resource Augmentation Plan was approved by SEIAA. Total bugdatory provision with respect to remediation plan and natural & community resource augmentation plan is Rs. 1,72,56,250/- as proposed by the Project Authority.

The Project Authorities vide letter dated 06.10.2025 claimed expenditure as follows for implementation of remediation plan and natural & community resource augmentation plan of Rs. 1,72,56,250 /-:

Sl. No.	Component	Action Plan Implemented	Amount (INR)
1	Natural & Community Resource Augmentation Plan	Construction an operationalization of Xavier's English School at Vinoba Bhave Ashram, Plot No. 1201(P) & 1259(P), Khata No. 1, Ward No. 13, JNAC, Burmamines, Jamshedpur, for the benefit of children from the leprosy colony.	1,31,65,250.00
2	Ecological Damage & Remediation Plan	Plantation and Green Belt Development in and around the project site.	40,91,000.00
Total Expenditure Incurred			1,72,56,250.00

This was considered in the 127th meeting of SEAC held on 09th to 13th October, 2025 and accordingly a site visit was done on 20.12.2025. During site visit it was observed that :

A. Regarding implementation of Natural & Community Resource Augmentation Plan

- During site visit to the Xavier's English School at Vinoba Bhave Ashram, Plot No. 1201(P) & 1259(P), Khata No. 1, Ward No. 13, JNAC, Burmamines, Jamshedpur the building and the entire premises appear to be very old and construced prior to grant of EC.
- No part of the school appeared to have been constructed after the date of issuing of EC.

Accordingly, during site visit the project authority were asked to substantiate their claim of incurring expenses out of the budget for remediation plan and natural and community resource augmentation plan. They were asked to provide the details alongwith evidence of the part of school which they claim to have been done out of

the remediation plan and natural & community resource augmentation plan. But they could not provide the required details.

B. Regarding implementation of Ecological Damage & Remediation Plan

- i. Regarding the implementation of Ecological Damage & Remediation Plan, the PAs claim that Plantation and Green Belt Development has been done in and around the project site with a budgetary expenditure of Rs. 40,91,000/-.
- ii. During site visit to the claimed green belt development site behind P & M Hi-Tech City Centre Mall on a hillock which was fly ash and other solid waste dump site of Tata Steel. The Project Authority were asked to provide documentary evidence proving that it has been done by P & M Hi-Tech City Centre Mall with the permission from Tata Steel Limited.

No such details and evidences as required above has been submitted by the Project Authority to SEAC.

No proposal for implementation of the remediation plan & natural and community resource augmentation plan in the Gausala premises at Chakulia, East Singhbhum has been received by SEAC till now.

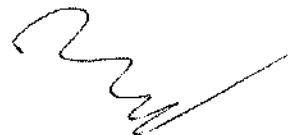
Hence, the allegation made through e-mail dated 17.07.2026 are totally false, misleading and baseless.

Hence, SEIAA is requested that the above may be intimated to all the addressee of the e-mail dated 17.07.2026.

- iii. Letter no. 487/M, dated 31.07.2026 from Deputy Commissioner Jamtara regarding re-evaluation and appropriate action w.r.t. Environmental Clearances (ECs) issued under category 'B2' for mining leases in Phuljori Mauza, District Jamtara.

Considering the letter from Deputy Commissioner, Jamtara to Member Secretary, SEIAA vide letter no. 487/M, dated 31.07.2026, the Committee is of the view that a show cause notice to be sent to all the Project Authorities of three mines as mentioned in the above letter and to provide their clarification in the matter.

Member Secretary, SEAC is to write a letter to three mining lease holder which is mentioned in above letter of Deputy Commissioner, Jamtara.



- B. E-mail dated 24.07.2026 from Shri Santosh Kumar Gupta, M/s Shri Jai Balaji Construction regarding request for point-wise clarification in Half yearly Compliance Report.

The PAs are required to submit details with documentary evidences of the status of their mines regarding compliance of conditions of EC failing which necessary legal action will be initiated.

Member Secretary, SEAC is hereby authorized to ask the required clarification from Project Authority.

- C. Letter no. 185, dated 19.01.2026 from Ahmad Belal Anwar, IFS, DFO, Gumla Forest Division related to following projects :

- i. Dunduria Stone Mine of Shri Naveen Kumar Singh, Village : Dunduria, Circle : Gumla, Distt. : Gumla, Jharkhand (1.618 Ha) (Proposal no.: SIA/JH/MIN/ 529871 /2025).

Replies in the above matter has been received from Dunduria Stone Mine of Shri Naveen Kumar Singh and the replies are found to be satisfactory w.r.t. EC condition no. I (4 & 5).

Hence, the comment of SEAC is being sent to SEIAA for further communication.

- D. Letter dated 21.08.2026 sent via email by M/s Vasundhara Homes Pvt. Ltd. regarding utilization of remaining amount under Natural & Community Resource Augmentation Plan and Assessment of Ecological Damage & Remediation Plan w.r.t. (i) Vasundhara Elegance (ii) Vasundhara Megamart and (iii) Vasundhara Radiance at Mouza : Argora, Distt. : Ranchi.

The SEAC has no objection to the mode of implementation of the Natural & Community Resource Augmentation Plan and Assessment of Ecological Damage & Remediation Plan.

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E. Examination of six monthly compliance report submitted to SEIAA, Jharkhand :

- i. Upraili Kanhai Stone Deposit of Smt. Hengamuni Murmu & Others, Village : Upraili Kanhai, Anchal : Tisri, Distt. : Giridih, Jharkhand (1.56 Ha).
- ii. Dubjora Stone Deposit of M/s S.R. Stone Mines (Partner : Shri Sanjay Bharti & Shri Rajaram Singh Chauhan), Village : Dubjora, Anchal : Sarwan, Distt. : Deoghar, Jharkhand (1.23 Ha).
- iii. Kordar Stone Mine of M/s Mahadev Black Stone Company (Partner : Shri Bhagwan Bhagat), Mauza : Kordar, Thana : Taljhari, Anchal : Pathna, Distt. : Sahibganj, Jharkhand (2.835 Ha).
- iv. Ganeshpur Stone Deposit of M/s R.N. Construction, Village : Ganeshpur, Thana : Ormanjhi, Dist. : Ranchi, Jharkhand (1.44 Ha).
- v. Chaprakocha Stone Mine of Shri Moiz Akhtar, Village : Chaprakocha, Tehsil : Ormanjhi, Dist. : Ranchi, Jharkhand (1.555 Ha).
- vi. Chhutupalu Stone Mine of M/s Navratan Mines (Shri Gopal Kumar Singh & Partners), Village : Chhutupalu, Block : Ormanjhi, Thana : Ormanjhi (47), Distt. : Ranchi, Jharkhand (0.485 Ha).
- vii. Chaprakocha Stone Deposit of M/s Hardrock Infra (Partners : (i) Shri Nitesh Sharda (ii) Mr. Moij Akhtar (iii) Shri Varun Lalwani), Mouza : Chaprakocha, Anchal : Ormanjhi, Distt. : Ranchi, Jharkhand (0.668 Ha).
- viii. Stone Mine of M/s Bhagwan Stone Works, Vill- Borna, Bishanpur, Tehsil- Pathna, Dist- Sahibganj Jharkhand.(2.42 Ha).
- ix. Raedih Stone Deposit of M/s Vinayak Stone Quayyr at Vill- Raedih, Thana- Domchanch, Dist- Koderma, Jhk (2.023 Ha).
- x. Bhuska Stone Deposit of Sri Dinesh Tanwani, Village : Bhuska, Thana : Pakur, Dist. : Pakur, Jharkhand (2.0 Ha).

The compliance reports were examined. All points of EC conditions are not adequately addressed, subjective in nature and no proper evidence has been provided.

Following general observations are made after examining 10 number of EC compliance report received :-

- i. Details of all applicable statutory clearances and its copies are not given.
- ii. Name and number of PPEs used and evidence ensuring its use by worker is poorly detailed.

- iii. Number of trees planted including those planted under "Ek Ped Ma Ke Naam" are not clearly defined. In many cases no evidence given in form of the photographs.
- iv. Details about water sprinkling in terms of tanker capacity and number of times water is sprayed is not given.
- v. Occupational health check up- Summary of findings of health test reports for new joiners and periodical reports for existing workers is not provided. Sample Test report of selected employees is also not attached.
- vi. CTE / CTO - No reference about grant and validity of same described properly. Evidence also not given.
- vii. Mitigation measures taken are not described and no details are given about status of its implementation.
- viii. News paper publication and upload of EC granted on company website - No evidence provided
- ix. Monitoring report- Inadequate description given in text about sampling locations, monitoring findings. No reference in text about monitoring report attached.
- x. Catch pit/ settling tank and garland drain- Specification w.r.t. their no. location and dimensions not described. Evidence also not provided.
- xi. Environment management cell – organogram not given.
- xii. Submission of 6 monthly compliance report in timely manner- No evidence provided.

Member Secretary, SEAC will seek clarification and details with evidence from the Project Authorities.

The replies so received will be further examined.

Day 2 : 24th August, 2026 [Monday]

A. Site visit report to :

- i. **"Proposed Multistoried Apartment" of M/s Oceanic Buildtech & Construction Pvt. Ltd., Village : Argora, Thana : Argora, Thana no. : 207, Tehsil : Argora, Dist. : Ranchi, Jharkhand.**

The Project Authorities, in the 133rd meeting of SEAC, had submitted documented evidence of implementation of Remediation Plan & Natural and Community Resource Augmentation Plan as per EC letter no. EC/SEIAA/2022-23/2561/2022/257, dated 09.09.2022.

It was decided to have a joint site visit with the representative from RO, MoEF&CC, Govt. of India, Ranchi and SEAC, Jharkhand as per direction of S.O. no. 804 (E), dated 14.03.2017, to evidence the implementation of the Remediation Plan & Natural and Community Resource Augmentation Plan as reported.

As per Environmental Clearance letter no. EC/SEIAA/2022-23/2561/2022/257, dated 09.09.2022, the Remediation Plan & Natural and Community Resource Augmentation Plan was as follows :-

Sl. No.	Major Environment	Details	Cost Rs in Lacs	Status
1	Air Environment	Provide Air monitoring equipments	10.0	Air Monitoring equipments installed at Argora, Ranchi by Project Authority
2	Water Environment	Repair of culverts and embankments etc or any suggestion from the local authority.	10.0	Remediation done by DFO, Ranchi Forest Division, Ranchi
3	Soil Environment	Green belt development.	5.00	
4.	Socio-Economic Environment	Provide equipments etc to charitable school, hospital and other allied services.	5.00	
5.	Energy conversation	Provide solar power panel.	2.50	
Total Cost Rs. In Lacs			32.50	

The PAs had approached the DFO, Ranchi and requested vide letter no. Nil, dated 21.02.2026 to execute the above remediation plan and submitted a sum of Rupees 22,50,000/- to Divisional Forest Officer, Ranchi vide Bankers Cheque no. 172802, dated 19.02.2026 of State Bank of India for the purpose of execution and implementation of the

above plan. The balance amount of Rs. 10,00,000/- has been utilized directly by the PAs for installation of Continuous Ambient Air Quality Monitoring System (CAAQMS) at Harmu – Argora bypass road, Near Sailor's Knot Restaurant, Ranchi

The DFO, Ranchi had completed the execution of the above Remediation Plan & Natural and Community Resource Augmentation Plan worth Rs. 22,50,000/- and provided the details of the same to the SEIAA, Jharkhand vide letter no. 2063, dated 02.07.2026.

The utilization of the funds are done and certified by DFO, Ranchi which are as per the above mentioned Remediation Plan & Natural and Community Resource Augmentation Plan.

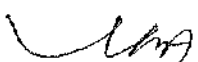
As per the report of the DFO, Ranchi alongwith the details and photograph provided are as follows:-

- i. Repair of 02 (Two) Check Dams at Radhu River, Horhap worth Rs. 10 Lakh.
- ii. Plantation in Baridih Park, Sembo worth Rs. 5.00 Lakh.
- iii. Outdoor metallic exercise structures installed and medical kit were distributed at PM Shri Kasturba Gandhi Balika Vidyalaya, Silli, Ranchi worth Rs. 5.00 Lakh.
- iv. 5 KW Solar panels installed at Horhap Rest House, Horhap worth Rs. 2.50 Lakh.

During the site visit on 24.08.2026 the team witnessed the reported work by the DFO, Ranchi and further the installation of the CAAQMS at Harmu – Argora bypass road, Near Sailor's Knot Restaurant, Ranchi was also evidenced.

Hence, it is recommended and requested for further action to facilitate the release of the Bank Guarantee of Rupees 32,50,000 (Rupees Thirty Two Lakh Fifty Thousand only) submitted to Jharkhand State Pollution Control Board, Ranchi, vide Bank Guarantee No. : 087GT02222410001 dated : 29.08.2022.

Hence, the Member Secretary, SEAC will write a formal letter to SEIAA regarding above.



ii. Grain Based Distillery with Cogeneration Plant of M/s Sheonarain Jaiswal Pvt. Ltd., Village : Balsiring, Tehsil : Namkum, Distt. : Ranchi, Jharkhand.

The Project Authorities, in the 133rd meeting of SEAC, had submitted documented evidence of implementation of Remediation Plan & Natural and Community Resource Augmentation Plan as per EC letter no. EC/SEIAA/2022-23/2737/2023/289, dated 06.10.2023.

It was decided to have a joint site visit with the representative from RO, MoEF&CC, Govt. of India, Ranchi and SEAC, Jharkhand as per direction of S.O. no. 804 (E), dated 14.03.2017, to evidence the implementation of the Remediation Plan & Natural and Community Resource Augmentation Plan as reported.

As per Environmental Clearance letter no. EC/SEIAA/2022-23/2737/2023/289, dated 06.10.2023, the Remediation Plan & Natural and Community Resource Augmentation Plan was as follows :-

Components	Details	Budgetary Provision (in Rs. Lakhs)
1. Air Environment	Health Camps in Balsiring & Guthiya Villages for checking & Treatment of Respiratory ailments (2 times at the interval of 4 months – upto Mar, 2024)	5.50
2. Soil Environment	To check soil erosion, Tree Plantation around Blue Pond near project site (360 Nos. of Trees @ Rs. 1250 will be planted by Mar, 2024)	4.50
3. Social Environment	Construction of Road in effected area (700 m.) by Mar, 2024.	20.0
4. Energy Conservation	Provision of Solar Panels in Guthiya and Balsiring villages (100 Nos. 75 Watt. Solar Panel @ Rs. 5700/- each – 50 Nos. in each village by Jul, 2024)	5.70
5. Community Development	Skill Development training of local youths (100 Nos. youth @ Rs. 5000/= each) (Computer & IT Skill training for 50 nos. male youths and Stitching & Embroidery training for 50 nos. female youths by Dec, 2024)	5.0
GRAND TOTAL		40.70

The PAs had approached the DFO, Ranchi and requested vide letter no. Nil, dated 12.01.2026 to execute the above remediation plan and submitted a sum of Rupees 40,70,000/- to Divisional Forest Officer, Ranchi vide DD no. 003884, dated 12.01.2026 of HDFC for the purpose of execution and implementation of the above plan.

The DFO, Ranchi had completed the execution of the above Remediation Plan & Natural and Community Resource Augmentation Plan and provided the details of the same to the PAs vide letter no. 1514, dated 04.05.2026.

The utilization of the funds are done and certified by DFO, Ranchi which are as per the above mentioned Remediation Plan & Natural and Community Resource Augmentation Plan.

As per the report of the DFO, Ranchi alongwith the details and photograph provided are as follows:-

- i. General Health care in Balsiring and Guthiya villages done through Devinika Hospital & Research Center with distribution of free medicines and all formal checkups worth Rs. 5.50 Lakh.
- ii. Plantation of 300 plants with PVC Gabion done near the Blue Pond area in Guthiya village worth Rs. 4.50 Lakh.
- iii. Construction of PCC Road in Guthiya village done (length 800 ft. width 10 ft. and thickness 6 inch) worth Rs. 20 Lakh.
- iv. Installed two numbers of high mast solar lights in Guthiya village and Balsiring village worth Rs. 5.70 Lakh.
- v. Skill Development Training was imparted in Guthiya village and Balsiring village in Ranchi regarding Computer & IT Skill Training for Boys and Sticking & Embroidery skill training for Girls worth Rs. 5 Lakh.

During the site visit on 24.08.2026 the team witnessed the reported work by the DFO, Ranchi.

Hence, it is recommended and requested for further action to facilitate the release of the Bank Guarantee of Rupees 40,70,000 (Rupees Forty Lakh Seventy Thousand only) submitted to Jharkhand State Pollution Control Board, Ranchi, vide Bank Guarantee No. : 087GT02232720005 dated : 29.09.2023.

Hence, the Member Secretary, SEAC will write a formal letter to SEIAA regarding above.

Day 3 : 25th August, 2026 [Tuesday]

A. Matter related to inspection and monitoring of Remediation Plan and submit the report to SEIAA for release of Bank Guarantee submitted by Project Proponent to Jharkhand State Pollution Control Board (JSPCB).

- i. Residential & Commercial Complex Project "The Emporio" of M/s Alokik Infra Build LLP, Village : Saraidhela, Distt. : Dhanbad, Jharkhand.
- ii. "The Pride" Commercial Building of M/s Alokik Infra Navnirman Pvt. Ltd., Village : Saraidhela, Distt. : Dhanbad, Jharkhand.

The Director of the above two projects, Shri Ritesh Kumar Sharma, made a personal appearance before the SEAC on 27.08.2026 and admitted as follows :

- i. The earlier proposal submitted was due to lack of his understanding of the requirement and agreed to implement the revised Remediation Plan & Natural and Community Resource Augmentation Plan and submit the same to SEAC for consideration.
- ii. He accepted that the mail dated 23.07.2026 was sent mistakenly due to lack of the understanding.

Accordingly, SEAC agreed to consider his revised proposal as and when submitted.

B. Consideration of proposals :

1. Pharathiya Brick Clay Deposit of Shri Nurul Hoda, Village : Pharathiya, Thana : Garhwa, Thana no. : 282, Distt.: Garhwa, Jharkhand (0.80 Ha).

(Proposal no.: SIA/JH/MIN/580573 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/ Annum

Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	Pharathiya Brick Clay Deposit
2.	Lessee:	M/S Pharathiya Brick Clay Deposit, Proprietor: Shri Nurul Hoda
3.	Lessee Address	At Mauza-Pharathiya, Thana – Garhwa, District- Garhwa, Jharkhand.
4.	Mine Lease Area	0.80ha Acres-1.98ACRE
5.	Type of Land	Non-Forest – Raiyati Land
6.	Project Cost	RS- 29.13 Lakh
7.	EMP Budget	Capital: RS –4.63Lakh Recurring: RS –3.83Lakh
8.	New or Expansion	New
9.	Mineable Reserves	9180 CUM
10.	Mine Life	8years only
11.	Man power	12
12.	Water Requirement	5.052 KLD (Drinking: 0.180 KLD, Dust Suppression:1.74KLD, Plantation:3.132KLD
13.	Water Source	Tube well of nearby Villages
14.	DG Set /power	-
15.	Crusher	No crusher
16.	Nearest Water Body	Danro River is at a distance of 365 m in the East side (EMP submitted)
17.	Nearest Habitation	Few houses are at a distance of 200m from the lease area in north-west direction (EMP submitted)
18.	Nearest Rail Station	Garhwa Road Railway Station- 3.5 km in NE
19.	Nearest Airport	Gaya Airport, Bihar – 126 km in NE
20.	Nearest Forest	Divisional Forest Officer, Palamu Tiger Reserve, South Chotanagpur Division, Medininagar, vide memo no.-781, Dated- 22.09.2023 certified that the distance of reserved Protected/forest is more than 250 meter from proposed project site.
21.	Road & Highways	Garhwa- Rajhara Road is approx. 1.2 km away in West direction.
22.	Approach road	Distance of Approach Road 435 m.
23.	Distance of nearest ESZ of Wildlife	DFO Wildlife Garhwa North Division, Letter no.- 1288 Dated- 15.07.2022 certified that the proposed project site is outside Eco Sensitive Zone of Palamu Tiger Reserve,

	Sanctuary or National Park	South Chotanagpur Division. Palamu Tiger Reserve is at a distance of 47.44 km in the SE direction.
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CO-ORDINATES

Point No.	Toposheet:63P/16	
Sl. No.	Latitude	Longitude
1	24°11'27.16"N	83°51'58.02"E
2	24°11'27.77"N	83°51'55.35"E
3	24°11'31.41"N	83°51'57.65"E
4	24°11'30.56"N	83°51'59.20"E

LAND DETAILS

Khata no.	Plot no.
151 & 12	1274 & 1284

STATUTORY CLEARANCES

1	LOI / Lease docs	:	A part of land is owned by the Project Authority and rest is taken on Lease.
2	CO	:	The CO, Garhwa, Sadar vide letter no. 687, dated 02.07.2022 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyan & Register II.
3	DMO Cluster	:	DMO, Garhwa vide memo no. 435/M, dated 18.05.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	Deputy Director, Palamu Tiger Project, South Division, Medininagar vide letter no. 781, dated 22.09.2023 certified that the proposed project site is outside Eco Sensitive Zone of Palamu Tiger Reserve.
5	DFO Territorial	:	Divisional Forest Officer, Garhwa North Division vide letter no. 1288, dated 15.07.2022 certified that the distance of notified forest is more than 250 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Garhwa District (Sl. no. 16).
7	Gram Sabha	:	Gram Sabha conducted on 10.09.2022.

8	Mine Plan Approval	:	Approved by AMO, Garhwa vide Letter No. 1238, dated 12.09.2022.
9	Qualified Person	:	Shri Surendra Sai was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.51ha	Life of Mine – 8Years
3	Waste Generation	:	--	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Bench: size & No	:	--	
7	Elevation of Mine	:	182m AMSL to 181 m AMSL	
8	Ground Level Elevation	:	181m AMSL	
9	Ultimate Working Depth	:	179 mAMSL	
10	Water Table	:	--	
11	Topography of Mine	:	Area represents flat topography	
12	Explosive Requirement	:	--	
13	Diesel/Fuel requirement	:	--	

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Land to be used at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Quarry	0	0.33	0.51 (Water Body)
2	Road	0	Merge with quarry	Nil (comes under quarry)
3	Berm area Plantation (greenbelt)	0	0.29 (within 1 m)	0.29 (plantation)
4	Total used area	0	0.62	0.80
5	Unutilized area	0.80	0.18	0
Total		0.80	0.80	0.80

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.29	464	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Length of Approach Road Area (m.)	435	580	2m X 2 m spacing in two rows both side		
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		1,044			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

[Handwritten signatures and marks]

Solid Waste Management

The top soil of depth 0.2 m and volume 1020 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
1044 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	3,13,200	1,04,400
Water Tanker @Rs. 500 per Tanker for Drinking (0.180KLD) Dust Suppression (1.74 KLD) & Horticulture (3.132 KLD) Total water requirement- 5.132 KLD 5.132 KLD X 200 Days = 1026 KLD 1026 KLD / 4 KLD = 257 Tankers	0	1,28,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF& CC (2% of project cost)	0	1,00,000
To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	4,63,200	3,82,900

Project cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. In Lakh
1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	3.0	0.5
3.	Manual Tools	0.50	--
4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	4.63	3.83
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
	Total	29.13	7.83

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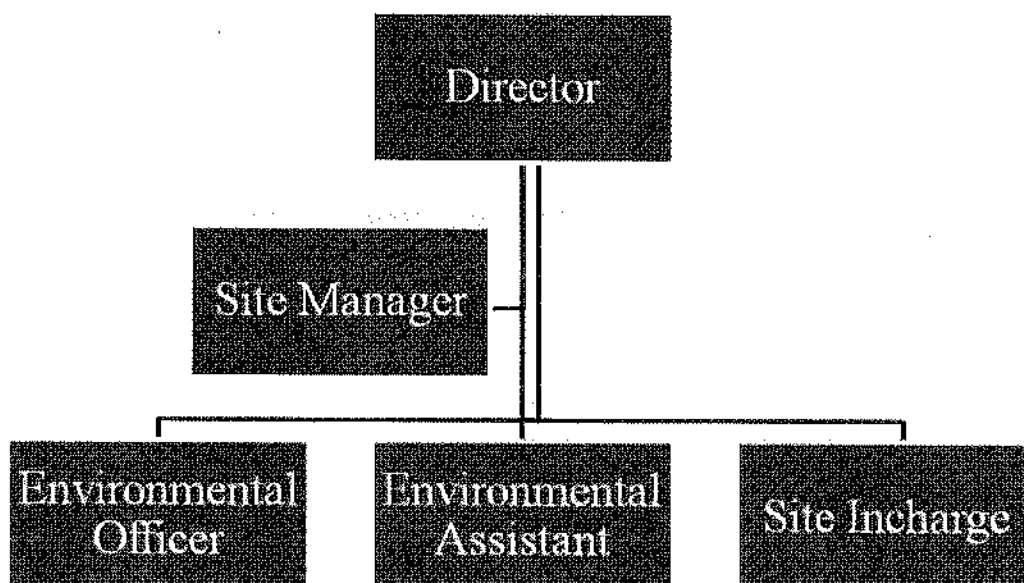
Environment Monitoring Programme:

S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1020 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality Management	- Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. - Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.

Risk & Hazard	▪ Accidents due vehicles. ▪ Accidents at loading point.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Pharathiya Brick Clay Deposit of Shri Nurul Hoda, Village : Pharathiya, Thana : Garhwa, Thana no. : 282, Distt.: Garhwa, Jharkhand (0.80 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The

proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.

- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

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2. Ordinary Soil Mining of M/s Ajanta Bricks Field (Prop. : Shri Mukim Akhtar), Village : Sirasin, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (1.187 Ha).

(Proposal no.: SIA/JH/MIN/583684/2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/Annum

Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	: Ordinary soil Mining
2.	Lessee:	: M/S Ajanta Bricks Field, Proprietor: Shri Mukim Akhtar
3.	Lessee Address	: At mauza- Sirasin, Thana – Barharwa, District- Sahibganj, Jharkhand.
4.	Mine Lease Area	: 1.187ha Acres-2.935ACRE
5.	Type of Land	: Non-Forest – Raiyati Land
6.	Project Cost	: RS- 28.58Lakh
7.	EMP Budget	: Capital: RS –4.08Lakh Recurring: RS – 3.1Lakh
8.	New or Expansion	: New
9.	Mineable Reserves	: 19330 CUM
10.	Mine Life	: 16years only
11.	Man power	: 10
12.	Water Requirement	: 3.01 KLD (Drinking: 0.150 KLD, Dust Suppression:0.28KLD, Plantation:2.58KLD
13.	Water Source	: Tube well of nearby Villages
14.	DG Set /power	: -
15.	Crusher	: No crusher
16.	Nearest Water Body	: Few ponds are present within a distance of 25 m in the north direction. (EMP Submitted)
17.	Nearest Habitation	: Few houses is at a distance of 270 m from the lease area in South East direction (EMP submitted)
18.	Nearest Rail Station	: Bonidanga Railway Station is located at an aerial distance of approximately 7.11 km in the south-west (SW) direction from the project site.
19.	Nearest Airport	: Deoghar Airport which is about 126 km SW

20.	Nearest Forest	:	Divisional Forest Officer, Sahibganj, vide memo no.-1128, Dated- 02.06.2026 certified that the distance of reserved Protected/forest is more than 250 meter (689 m) from proposed project site
21.	Road & Highways	:	NH-33, at 1.3 km southern direction Approach Road is approx. 510 m.
22.	Approach road	:	Distance of Approach Road 510 m.
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	DFO Wildlife, Sahibganj, Letter no. - 1127 Dated- 02.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 44.81 km.

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24°51'42.00156"N	87°52'9.60419"E
2	24°51'42.14220"N	87°52'8.72769"E
3	24°51'41.29344"N	87°52'8.21832"E
4	24°51'41.06819"N	87°52'9.37139"E
5	24°51'40.42414"N	87°52'9.14221"E
6	24°51'40.48112"N	87°52'8.75276"E
7	24°51'40.07796"N	87°52'8.68246"E
8	24°51'40.27960"N	87°52'7.08578"E
9	24°51'39.45176"N	87°52'6.97624"E
10	24°51'39.11914"N	87°52'6.77269"E
11	24°51'38.42327"N	87°52'6.60049"E
12	24°51'37.65031"N	87°52'6.22893"E
13	24°51'37.39168"N	87°52'6.76569"E
14	24°51'36.97553"N	87°52'6.74017"E
15	24°51'36.90415"N	87°52'5.13588"E
16	24°51'37.41017"N	87°52'5.17766"E
17	24°51'37.59925"N	87°52'4.42177"E
18	24°51'37.47989"N	87°52'3.15639"E

19	24°51'38.61146"N	87°52'3.13234"E
20	24°51'39.73655"N	87°52'3.07401"E
21	24°51'39.96380"N	87°52'2.44216"E
22	24°51'40.16866"N	87°52'1.59799"E
23	24°51'40.68119"N	87°52'1.96323"E
24	24°51'40.13424"N	87°52'3.14089"E
25	24°51'39.72812"N	87°52'3.86885"E
26	24°51'39.23121"N	87°52'3.87942"E
27	24°51'38.92569"N	87°52'5.19698"E
28	24°51'38.67980"N	87°52'6.10298"E
29	24°51'40.39074"N	87°52'6.65292"E
30	24°51'40.81561"N	87°52'6.60798"E
31	24°51'40.74420"N	87°52'7.22397"E
32	24°51'41.05102"N	87°52'7.39346"E
33	24°51'41.11618"N	87°52'7.15429"E
34	24°51'41.81409"N	87°52'7.44197"E
35	24°51'42.36898"N	87°52'7.72115"E
36	24°51'42.40893"N	87°52'8.89548"E
37	24°51'42.20129"N	87°52'9.64647"E
38	24°51'42.40744"N	87°52'10.32964"E
39	24°51'42.21063"N	87°52'11.40920"E
40	24°51'42.28817"N	87°52'11.68689"E
41	24°51'42.16079"N	87°52'11.69413"E
42	24°51'42.06166"N	87°52'13.51749"E
43	24°51'41.39151"N	87°52'13.42490"E
44	24°51'41.26912"N	87°52'11.77990"E
45	24°51'41.84794"N	87°52'11.67684"E
46	24°51'41.92711"N	87°52'10.60668"E

LAND DETAILS

Khata no.	Plot no.
71, 101, 73, 01 & 121	41, 54, 55, 56, 57, 66, 70, 71 (P), 72, 53 (P), 64 (P) & 75 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	A part of land is owned by the Project Authority and rest is taken on Lease.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 381/Ra., dated 25.04.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatyan & Register II.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 619/M, dated 16.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 1127, dated 02.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 1128, dated 02.06.2026 certified that the distance of notified forest is 689 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 621/M, dated 16.04.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 177).
7	Gram Sabha	:	Gram Sabha conducted on 25.01.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 878/M, dated 23.06.2026.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	1.074 ha	Life of Mine – 16Years
3	Waste Generation	:	0.0cum	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Benches: size & No	:	--	

7	Elevation of Mine	:	27 m AMSL to 25 m AMSL
8	Ground Level Elevation	:	25 m AMSL
9	Ultimate Working Depth	:	23 m AMSL
10	Topography of Mine	:	Area represents Plain to gently undulating terrain topography
11	Explosive Requirement	:	--
12	Diesel/Fuel requirement	:	--

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period (Ha)	Land to be at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.352	1.074	Water Body
2	Safety zone	0	0.113	0.113	Plantation
3	Unutilized	1.187	0.722	0	--
Total		1.187	1.187	1.187	

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.113	180	1600 Tree per Hectare	1st Year	Arjun, Jackfruits,

Length of Approach Road Area (m.)	510	680	2m X 2 m spacing in two rows both side		Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		860			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 2374 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
860 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	2,58,000	86,000
Water Tanker @Rs. 500 per Tanker for Drinking (0.150KLD) Dust Suppression (0.28 KLD) & Horticulture (2.58 KLD) Total water requirement- 3.01 KLD 3.01 KLD X 200 Days = 602 KLD 602 KLD / 4 KLD = 151 Tankers	0	75,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC (2% of project cost)	0	1,00,000
To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	4,08,000	3,11,500

Project cost

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1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	3.0	0.5
3.	Manual Tools	0.50	--
4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	4.08	3.1
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		28.58	7.1

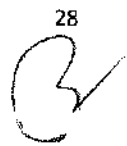
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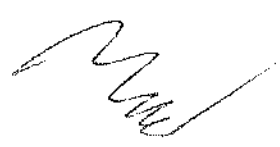
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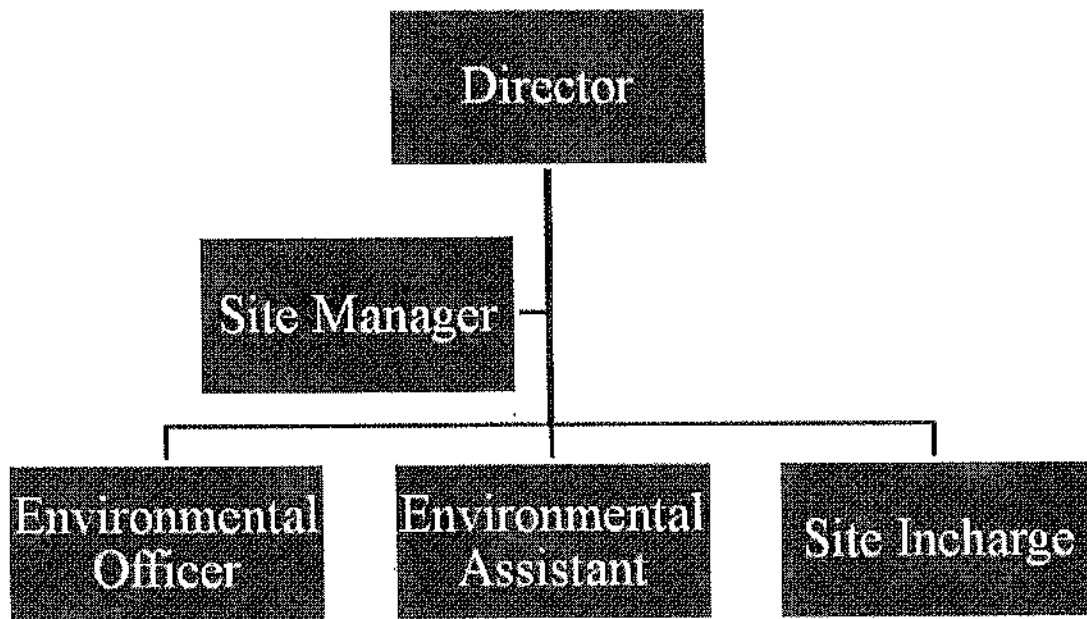
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Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s Ajanta Bricks Field (Prop. : Shri Mukim Akhtar), Village : Sirasin, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (1.187 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

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- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and

- thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

3. Ordinary Soil Mining of M/s Sahara Bricks (Prop. : Shri Mukim Akhtar), Village : Sirasin - Kamalpur, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.8259 Ha).

(Proposal no.: SIA/JH/MIN /583324 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/Annum

Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	: Ordinary soil Mining
2.	Lessee:	: M/S Sahara Bricks, Proprietor: Shri Mukim Akhtar
3.	Lessee Address	: At Mauza-Sirasin-Kamalpur, Thana – Barharwa, District- Sahibganj, Jharkhand.
4.	Mine Lease Area	: 0.8259 ha Acres-2.04ACRE
5.	Type of Land	: Non-Forest – Raiyati Land
6.	Project Cost	: RS- 26.78Lakh
7.	EMP Budget	: Capital: RS –2.28 Lakh Recurring: RS – 2.13 lakh
8.	New or Expansion	: New
9.	Mineable	: 13120 CUM

	Reserves		
10.	Mine Life	:	11years only
11.	Man power	:	10
12.	Water Requirement	:	1.45KLD (Drinking: 0.150 KLD, Dust Suppression:0.520KLD, Plantation: 0.78KLD
13.	Water Source	:	Tube well of nearby Villages
14.	DG Set /power	:	-
15.	Crusher	:	No crusher
16.	Nearest Water Body	:	Few ponds are present within a distance of 50 m in the South West direction. (EMP Submitted)
17.	Nearest Habitation	:	Few houses are at a distance of 40 m from the lease area in South West direction (EMP submitted)
18.	Nearest Rail Station	:	Bonidanga Railway station is located at an aerialdistance of approximately 6.45 km in the South -West (SW) Direction.
19.	Nearest Airport	:	Deoghar Airport which is about 125 km SW
20.	Nearest Forest	:	Divisional Forest Officer, Sahibganj, vide memo no.-1125, Dated- 02.06.2026 certified that the distance of reserved Protected/forest is more than 250 meter (575m) from proposed project site.
21.	Road & Highways	:	NH-33, at 0.91 km southern direction.
22.	Approach road	:	Distance of Approach Road 130 m.
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	DFO Wildlife, Sahibganj, Letter no. - 1126 Dated- 02.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 44.67 km.

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24°51'29.77381"N	87°51'44.56124"E
2	24°51'29.71459"N	87°51'45.00076"E
3	24°51'30.34019"N	87°51'45.02527"E
4	24°51'30.25654"N	87°51'45.85077"E
5	24°51'30.11993"N	87°51'46.51643"E
6	24°51'29.20961"N	87°51'46.39916"E
7	24°51'28.19696"N	87°51'46.47282"E
8	24°51'28.04652"N	87°51'47.02649"E

9	24°51'27.37614"N	87°51'46.78987"E
10	24°51'27.21819"N	87°51'46.60285"E
11	24°51'26.66901"N	87°51'46.54290"E
12	24°51'26.14563"N	87°51'46.34765"E
13	24°51'26.09123"N	87°51'46.20607"E
14	24°51'25.96656"N	87°51'46.25066"E
15	24°51'25.89925"N	87°51'45.97070"E
16	24°51'25.89072"N	87°51'45.37267"E
17	24°51'25.99983"N	87°51'44.47854"E
18	24°51'24.19567"N	87°51'43.46178"E
19	24°51'24.34070"N	87°51'43.39014"E
20	24°51'24.48460"N	87°51'43.42011"E
21	24°51'24.55285"N	87°51'43.27139"E
22	24°51'26.01596"N	87°51'43.74029"E
23	24°51'27.35038"N	87°51'44.16795"E
24	24°51'27.32615"N	87°51'44.57414"E
25	24°51'27.37127"N	87°51'44.91129"E
26	24°51'28.20791"N	87°51'44.89475"E
27	24°51'28.96997"N	87°51'44.81084"E
28	24°51'29.32497"N	87°51'44.37819"E

LAND DETAILS

Khata / Jamabandi no.	Plot / Daag no.
119, 129 & 51	7 (P), 8 & 158 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	A part of land is owned by the Project Authority and rest is taken on Lease.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 371/Ra., dated 25.04.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyon & Register II. During the appraisal it was seen from the KML that few houses and 3 pond exists within 100 meters from mining lease area. For which

			detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 617/M, dated 16.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 1126, dated 02.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 1125, dated 02.06.2026 certified that the distance of notified forest is 575 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 618/M, dated 16.04.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 177 & 178).
7	Gram Sabha	:	Gram Sabha conducted on 25.01.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 877/M, dated 23.06.2026.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.7725ha	Life of Mine – 11Years
3	Waste Generation	:	0.0cum	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Benches: size & No	:	--	
7	Elevation of Mine	:	35m AMSL to 37 m AMSL	
8	Ground Level Elevation	:	35 m AMSL	
9	Ultimate Working Depth	:	33 mAMSL	
10	Topography of Mine	:	Area represents plain to gently undulating terrain topography	
11	Explosive Requirement	:	--	
12	Diesel/Fuel requirement	:	--	

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period (Ha)	Land to be at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.3698	0.7725	Water Body
2	Safety zone	0	0.0534	0.0534	Plantation
3	Unutilized	0.8259	0.4027	0	—
Total		0.8259	0.8259	0.8259	

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.0534	86	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Length of Approach Road Area (m.)	130	174	2m X 2 m spacing in two rows both side		
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		260			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 1545 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
260 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	78,000	26,000
Water Tanker @Rs. 500 per Tanker for Drinking (0.150) Dust Suppression (0.52 KLD) & Horticulture (0.78 KLD) Total water requirement- 1.45 KLD 1.45 KLD X 200 Days = 290 KLD 290 KLD / 4 KLD = 73 Tankers	0	36,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC (2% of project cost)	0	1,00,000
To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	2,28,000	2,12,500

Project Cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. in Lakh
1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	3.0	0.5
3.	Manual Tools	0.50	--

4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	2.28	2.13
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		26.78	6.13

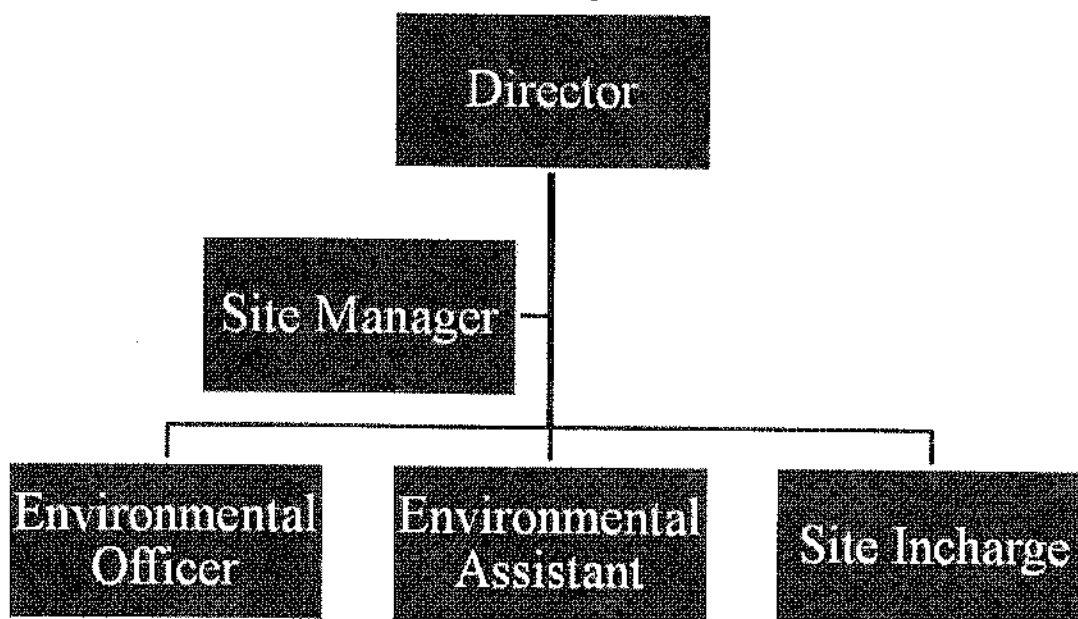
Environment Monitoring Programme:

S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1545 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality Management	- Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. - Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines.

	• All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	▪ Accidents due vehicles. ▪ Accidents at loading point.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s Sahara Bricks (Prop. : Shri Mukim Akhtar), Village : Sirasin - Kamalpur, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.8259 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution



Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.

- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

UMA

A

B

4. Ordinary Soil Mining of M/s J. Kisan Bricks (Prop. : Shri Jakir Hussain), Village : Mirzapur-Sirasin, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.8823 Ha).

(Proposal no.: SIA/JH/MIN /582953 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/ Annum

Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	: Ordinary soil Mining
2.	Lessee:	: M/S J. Kisan Bricks, Proprietor: Shri Jakir Hussain
3.	Lessee Address	: At mauza- Mirzapur-Sirasin, Thana – Barharwa, District- Sahibganj, Jharkhand.
4.	Mine Lease Area	: 0.8823ha Acres-2.18ACRE
5.	Type of Land	: Non-Forest – Raiyati Land
6.	Project Cost	: RS- 28.64Lakh
7.	EMP Budget	: Capital: RS –4.14Lakh Recurring: RS – 3.66Lakh
8.	New or Expansion	: New
9.	Mineable Reserves	: 13827 CUM
10.	Mine Life	: 12years only
11.	Man power	: 10
12.	Water Requirement	: 5.11 KLD (Drinking: 0.150 KLD, Dust Suppression:2.32KLD, Plantation:2.64KLD
13.	Water Source	: Tube well of nearby Villages
14.	DG Set /power	: -
15.	Crusher	: No crusher
16.	Nearest Water Body	: Few ponds are present within a distance of 30 m in the East direction. (EMP Submitted)
17.	Nearest Habitation	: Few houses are at a distance of 25 m from the lease area in South direction (EMP submitted)
18.	Nearest Rail Station	: Bonidanga Railway station is located at an aerial distance of approximately 5.98 km in the South-West (SW) Direction.
19.	Nearest Airport	: Deoghar Airport which is about 120 km SW
20.	Nearest Forest	: Divisional Forest Officer, Sahibganj, vide memo no.-244, Dated-

			05.02.2026 certified that the distance of reserved Protected/forest is more than 250 meter (323m) from proposed project site.
21.	Road & Highways	:	NH-33, at 0.58 km North-West direction.
22.	Approach road	:	Distance of Approach Road 580 m.
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park		DFO Wildlife, Sahibganj, Letter no. - 245 Dated- 05.02.2026 certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 44.29 km.

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24°50'42.1743199" N	87°51'53.82185618" E
2	24°50'42.24630181" N	87°51'54.33920151" E
3	24°50'42.23901524" N	87°51'55.12491072" E
4	24°50'42.58867510" N	87°51'55.29730725" E
5	24°50'42.98530976" N	87°51'55.20682304" E
6	24°50'43.34459510" N	87°51'55.45008041" E
7	24°50'43.09165574" N	87°51'56.04175360" E
8	24°50'42.92469268" N	87°51'56.72536819" E
9	24°50'43.19520315" N	87°51'56.92573950" E
10	24°50'43.10610664" N	87°51'58.95832455" E
11	24°50'43.02803016" N	87°52'00.73925353" E
12	24°50'42.95458595" N	87°52'02.41450487" E
13	24°50'42.18861941" N	87°52'02.42414341" E
14	24°50'41.47892027" N	87°52'02.38862001" E
15	24°50'41.44407697" N	87°52'02.20750352" E
16	24°50'41.17331267" N	87°52'01.65783643" E
17	24°50'41.08904900" N	87°52'01.33755449" E
18	24°50'41.54078399" N	87°52'01.31589449" E
19	24°50'42.01918466" N	87°52'01.33142978" E

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20	24°50'41.89205548" N	87°52'00.86712873" E
21	24°50'41.83997806" N	87°52'00.30433528" E
22	24°50'41.91437090" N	87°51'59.34746612" E
23	24°50'42.87299364" N	87°51'58.70458378" E
24	24°50'42.52616420" N	87°51'57.73844993" E
25	24°50'42.40778794" N	87°51'57.69311486" E
26	24°50'42.53303732" N	87°51'57.13212045" E
27	24°50'42.53034732" N	87°51'56.72541768" E
28	24°50'41.97346100" N	87°51'56.71735227" E
29	24°50'41.71535493" N	87°51'55.98384914" E
30	24°50'41.40962518" N	87°51'55.66462407" E
31	24°50'41.18234329" N	87°51'55.79028598" E
32	24°50'41.14815672" N	87°51'53.87466338" E

LAND DETAILS

Khata no.	Plot no.
148 & 28	520 (P) & 1 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	Owned land.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 150/Ra., dated 18.02.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatyan & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 100 meters and pond exists at a distance of 50 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 650/M, dated 23.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO -cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 245, dated 05.02.2026 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.

5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 244, dated 05.02.2026 certified that the distance of notified forest is 323 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 649/M, dated 23.04.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 177).
7	Gram Sabha	:	Gram Sabha conducted on 02.01.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 818/M, dated 05.06.2025.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.8161ha	Life of Mine – 12Years
3	Waste Generation	:	0.0cum	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Benches: size & No	:	--	
7	Elevation of Mine	:	27 m AMSL to 31 m AMSL	
8	Ground Level Elevation	:	27 m AMSL	
9	Ultimate Working Depth	:	25 mAMSL	
10	Topography of Mine	:	Area represents plain to gently undulating terrain topography	
11	Explosive Requirement	:	--	
12	Diesel/Fuel requirement	:	--	

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200

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5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period(Ha)	Land to be used at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.3697	0.8161	Water body
2	Safety zone	0	0.0662	0.0662	Plantation
3	Unutilized	0.8823	0.4464	0	—
Total		0.8823	0.8823	0.8823	

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.0662	106	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Length of Approach Road Area (m.)	580	774	2m X 2 m spacing in two rows both side		
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		880			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 1634 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
880 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	2,64,000	88,000
Water Tanker @Rs. 500 per Tanker for Drinking (0.150) Dust Suppression (2.32 KLD) & Horticulture (2.64 KLD) Total water requirement- 5.11 KLD 5.11 KLD X 200 Days = 1022 KL/ year 1022 KLD / 4 KLD = 256 Tankers	0	1,28,000
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF& CC (2% of project cost)	0	1,00,000
To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	4,14,000	3,66,000

Project cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. In Lakh
1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	3.0	0.5
3.	Manual Tools	0.50	--
4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	4.14	3.66
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		28.64	7.66

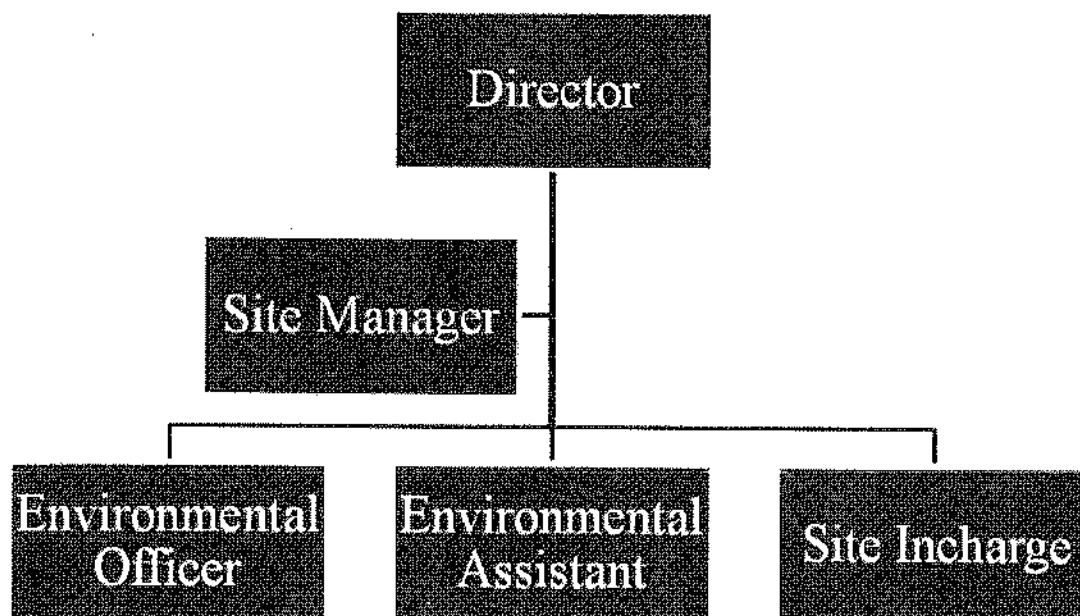
Environment Monitoring Programme:

S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1634 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality Management	- Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. - Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Accidents due vehicles.

	▪ Accidents at loading point.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s J. Kisan Bricks (Prop. : Shri Jakir Hussain), Village : Mirzapur-Sirasin, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.8823 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

5. Ordinary Soil Mining of M/s Sona No. 1 Bricks (Prop. : Shri Basirul Islam), Village : Risor, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.507 Ha).

(Proposal no.: SIA/JH/MIN /585476 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/ Annum
Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	: Ordinary soil Mining
2.	Lessee:	: M/S Sona No. 1 Bricks, Proprietor: Sri Basirul Islam
3.	Lessee Address	: At Mauza- Risor, Thana – Barharwa, District- Sahibganj, Jharkhand.
4.	Mine Lease Area	: 0.507ha Acres-1.253Acre
5.	Type of Land	: Non-Forest – Raiyati Land
6.	Project Cost	: RS- 26.34Lakh
7.	EMP Budget	: Capital: RS. –2.14Lakh Recurring: RS – 2.04Lakh
8.	New or Expansion	: New
9.	Mineable Reserves	: 8579 CUM
10.	Mine Life	: 7years only
11.	Man power	: 10
12.	Water Requirement	: 1.298 KLD (Drinking: 0.150 KLD, Dust Suppression:0.500 KLD, Plantation:0.648KLD
13.	Water Source	: Tube well of nearby Villages
14.	DG Set /power	: -
15.	Crusher	: No crusher
16.	Nearest Water Body	: Few ponds are present within a distance of 70 m in the South West direction. (EMP Submitted)
17.	Nearest Habitation	: Few houses are at a distance of 25 m from the lease area in North East direction(EMP submitted)
18.	Nearest Rail Station	: Bonidanga Railway station is located at an aerial distance of approximately 2.48 km in the South-West (SW) Direction.
19.	Nearest Airport	: Nearest Airport is Deoghar Airport which is about 122 km SW.
20.	Nearest Forest	: Divisional Forest Officer, Sahibganj, vide memo no.-496, Dated- 10.03.2026 certified that the distance of reserved Protected/forest is more than 250 meter (307 m) from

		proposed project site.
21.	Road & Highways	: NH-33, at 0.125 km Northern direction.
22.	Approach road	: Distance of Approach Road 125m.
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park	DFO Wildlife, Sahibganj, Letter no.- 497 Dated- 10.03.2026 certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 44.82 km.

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24°50'21.988"N	87°49'41.423"E
2	24°50'22.214"N	87°49'41.632"E
3	24°50'22.432"N	87°49'41.715"E
4	24°50'22.327"N	87°49'42.508"E
5	24°50'22.287"N	87°49'43.231"E
6	24°50'22.175"N	87°49'43.257"E
7	24°50'21.597"N	87°49'43.061"E
8	24°50'21.117"N	87°49'43.126"E
9	24°50'21.105"N	87°49'43.264"E
10	24°50'20.423"N	87°49'43.223"E
11	24°50'19.619"N	87°49'43.319"E
12	24°50'19.464"N	87°49'43.309"E
13	24°50'18.844"N	87°49'42.962"E
14	24°50'18.835"N	87°49'42.291"E
15	24°50'18.826"N	87°49'41.588"E
16	24°50'19.619"N	87°49'41.554"E
17	24°50'20.391"N	87°49'41.521"E
18	24°50'21.111"N	87°49'41.491"E
19	24°50'21.746"N	87°49'41.464"E

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LAND DETAILS

Khata no.	Plot no.
397	1097

STATUTORY CLEARANCES

1	LOI / Lease docs	:	Lease agreement made.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 312/Ra., dated 06.04.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyani & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 50 meters and pond exists at a distance of 100 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 655/M, dated 23.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 497, dated 10.03.2026 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 496, dated 10.03.2026 certified that the distance of notified forest is 307 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 656/M, dated 23.04.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 195).
7	Gram Sabha	:	Gram Sabha conducted on 26.02.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 978/M, dated 03.07.2026.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.4766ha	Life of Mine – 7Years
3	Waste Generation	:	0.0cum	

4	Stripping Ratio	:	0:0
5	Working Days	:	200
6	Bench: size & No	:	--
7	Elevation of Mine	:	28m AMSL to 30 m AMSL
8	Ground Level Elevation	:	28m AMSL
9	Ultimate Working Depth	:	26 mAMSL
10	Topography of Mine	:	Area represents plain to gently undulating terrain topography
11	Explosive Requirement	:	--
12	Diesel/Fuel requirement	:	--

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period(Ha)	Land to be at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.3703	0.4766	Cultivation land
2	Safety zone	0	0.0304	0.0304	Plantation
3	Unutilized	0.507	0.1063	0	—
Total		0.507	0.507	0.507	

ENVIRONMENT MANAGEMENT
Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.0304	49	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Length of Approach Road Area (m.)	125 m	167	2m X 2 m spacing in two rows both side		
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		216			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 1014 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
216 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	64,800	21,600
Water Tanker @Rs. 500 per Tanker for Drinking (0.150) Dust Suppression (0.500 KLD) & Horticulture (0.648 KLD) Total water requirement- 1.298KLD 1.298KLD X 200 Days = 260 KL/ year 260 KLD / 4 KLD = 65 Tankers	0	32,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF& CC (2% of project cost)	0	1,00,000

To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	2,14,800	2,04,100

Project cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. In Lakh
1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	2.5	0.5
3.	Manual Tools	0.70	--
4.	Operational Cost (Wages, Salary etc.)	--	2.10
5.	EMP	2.14	2.04
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		26.34	6.54

Environment Monitoring Programme:

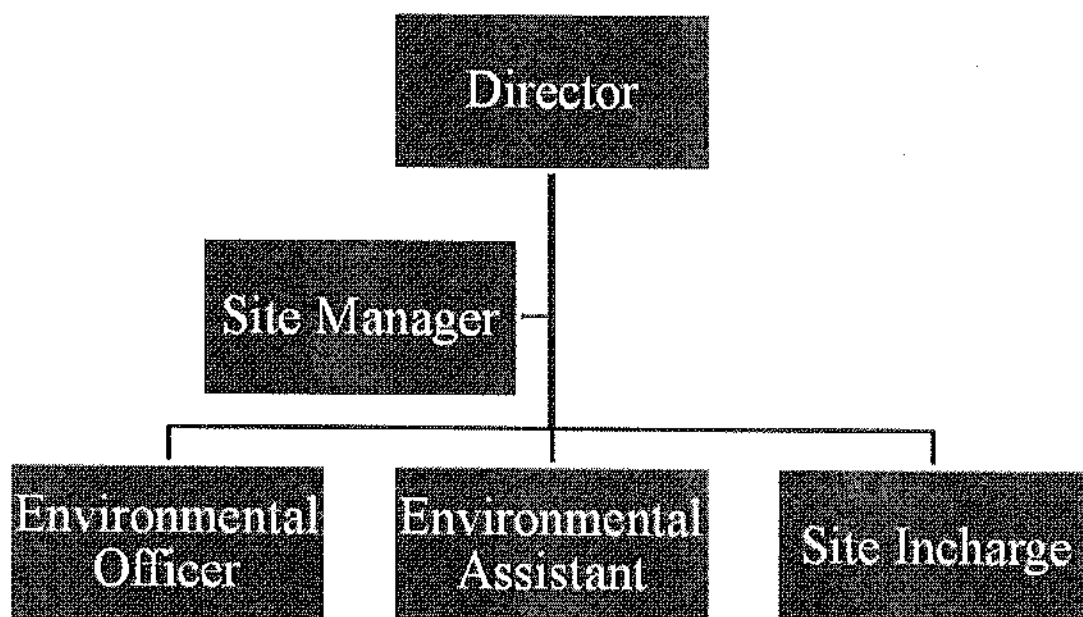
S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1014 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality	Topsoil will be carefully removed and stored separately for future use in

Management	plantation and reclamation. Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.
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	place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell structure

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Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
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- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s Sona No. 1 Bricks (Prop. : Shri Basirul Islam), Village : Risor, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.507 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be

done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

6. Ordinary Soil Mining of M/s Sony Bricks (Prop. : Shri Firoj Ahmad), Village : Risor, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.7466 Ha).

(Proposal no.: SIA/JH/MIN /585533 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/ Annum

Project and Location Details:

Sl. NO.	Parameter	Details
1.	Project Name	: Ordinary soil Mining
2.	Lessee:	: M/S Sony Bricks, Proprietor: Shri Firoj Ahmad
3.	Lessee Address	: At Mauza- Risor, Thana – Barharwa, District- Sahibganj, Jharkhand.
4.	Mine Lease Area	: 0.7466ha Acres-1.845 Acre
5.	Type of Land	: Non-Forest – Raiyati Land
6.	Project Cost	: RS- 24.32Lakh
7.	EMP Budget	: Capital: RS. –2.21Lakh Recurring: RS – 2.08Lakh

8.	New or Expansion	:	New
9.	Mineable Reserves	:	12259 Cum
10.	Mine Life	:	10years only
11.	Man power	:	10
12.	Water Requirement	:	1.4KLD (Drinking: 0.150 KLD, Dust Suppression:0.540KLD, Plantation:0.714KLD)
13.	Water Source	:	Tube well of nearby Villages
14.	DG Set /power	:	-
15.	Crusher	:	No crusher
16.	Nearest Water Body	:	Few ponds are present within a distance of 10 m in the Soth direction. (EMP Submitted)
17.	Nearest Habitation	:	Few houses are at a distance of 36 m from the lease area in South direction (EMP submitted)
18.	Nearest Rail Station	:	Bonidanga Railway station is located at an aerial distance of approximately 2.45 km in the South-West (SW) Direction.
19.	Nearest Airport	:	Nearest Airport is Deoghar Airport which is about 122 km SW.
20.	Nearest Forest	:	Divisional Forest Officer, Sahibganj, vide memo no.-2223, Dated- 08.11.2021 certified that the distance of reserved Protected/forest is more than 250 meter from proposed project site.
21.	Road & Highways	:	NH-33, at 180 meterSouthern direction.
22.	Approach road	:	Distance of Approach Road 135m.
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	DFO Wildlife, Sahibganj, Letter no.- 1253 Dated- 26.06.2024certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 44.41 km.

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24° 50' 29.22873422" N	087° 49' 27.54626657"E
2	24° 50' 29.7985245" N	087° 49' 27.79852456"E
3	24° 50' 29.86973724" N	087° 49' 27.86973724"E
4	24° 50' 30.28217009" N	087° 49' 27.92633997"E

[Handwritten signatures and marks: A, B, and others]

5	24°50'30.46950364" N	087° 49' 28.07626202"E
6	24°50' 30.85630356 " N	087° 49' 28.00425973"E
7	24°50'31.14314673 " N	087° 49' 28.13559885"E
8	24°50'31.46943439 " N	087° 49' 28.12086607"E
9	24°50'31.89488222 " N	087° 49' 28.13616529"E
10	24°50'32.17578637 " N	087° 49' 28.24145368"E
11	24°50'32.34686134" N	087° 49' 28.34129023"E
12	24°50'32.49431698" N	087° 49' 28.40645064"E
13	24°50'32.39500503"N	087° 49' 28.90650096"E
14	24°50'32.33107648"N	087° 49' 29.40192597"E
15	24°50'32.26482617"N	087° 49' 29.98098928"E
16	24°50'32.20947967"N	087° 49' 30.49520392"E
17	24°50'32.19904952"N	087° 49' 30.70672767"E
18	24°50'32.21013948"N	087° 49' 30.96624568"E
19	24°50'31.83702145"N	087° 49' 30.88897088"E
20	24°50'31.09767553"N	087° 49' 30.77717421"E
21	24°50'30.63083138"N	087° 49' 30.69374174"E
22	24°50'30.32886563"N	087° 49' 30.65649656"E
23	24°50'30.17098915"N	087° 49' 30.58984512"E
24	24°50'29.94373742"N	087° 49' 30.42861648"E
25	24°50'29.87635231"N	087° 49' 30.41226556"E
26	24°50'29.84518395"N	087° 49' 30.61081053"E
27	24°50'29.65441915"N	087° 49' 30.61024388"E
28	24°50'29.29286327"N	087° 49' 30.60628949"E
29	24°50' 29.12246874"N	087° 49' 30.52754877"E
30	24°50'29.15747081"N	087° 49' 30.16397820"E
31	24°50'29.12411757"N	087° 49' 29.48033696 "E
32	24°50'29.09987198"N	087° 49' 28.45806730"E
33	24°50'29.12002529"N	087° 49' 27.98898364"E
34	24°50'29.16216748"N	087° 49' 27.74872403"E

LAND DETAILS

Khata no.	Plot no.
208	613

STATUTORY CLEARANCES

1	LOI / Lease docs	:	Lease agreement made.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 155/Ra., dated 18.02.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyon & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 100 meters and pond exists at a distance of 50 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 657/M, dated 23.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 1253, dated 26.06.2024 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 2223, dated 08.11.2021 certified that the distance of reserved / protected forest is more than 250 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 659/M, dated 23.04.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 195).
7	Gram Sabha	:	Gram Sabha conducted on 22.01.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 977/M, dated 03.07.2026.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.7104 Ha	Life of Mine – 10Years

3	Waste Generation	:	0.0cum	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Benches: size & No	:	--	
7	Elevation of Mine	:	28m AMSL to 30 m AMSL	
8	Ground Level Elevation	:	28m AMSL	
9	Ultimate Working Depth	:	26 mAMSL	
10	Topography of Mine	:	Area represents plain to gently undulating terrain topography	
11	Explosive Requirement	:	--	
12	Diesel/Fuel requirement	:	--	

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period(Ha)	Land to be at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.3778	0.7104	Water body
2	Safety zone	0	0.0362	0.0362	Plantation
3	Unutilized	0.7466	0.3326	0	—
Total		0.7466	0.7466	0.7466	

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ENVIRONMENT MANAGEMENT
Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.0362	58	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem, Pipal, Mango etc.
Length of Approach Road Area (m.)	135 m	180	2m X 2 m spacing in two rows both side		
Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	
Backfilled (Ha.)	-	-			
Total		238			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 1493 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
238 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	71,400	23,800
Water Tanker @Rs. 500 per Tanker for Drinking (0.150) Dust Suppression (0.540 KLD) & Horticulture (0.714 KLD) Total water requirement- 1.4KLD 1.4KLD X 200 Days = 280 KL/year 280 KLD / 4 KLD = 70 Tankers	0	35,000
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC (2% of project cost)	0	1,00,000

To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	2,21,400	2,08,800

Project Cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. In Lakh
1.	Land Expenses & Other	15.00	1.5
2.	Temporary structures	0.70	0.5
3.	Manual Tools	0.50	--
4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	2.12	2.09
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		24.32	6.09

Environment Monitoring Programme:

S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1493 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality	Topsoil will be carefully removed and stored separately for future use in

Management	plantation and reclamation. Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	- Accidents due vehicles. - Accidents at loading point.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	- Mine road shall be made smooth regularly with a road roller. - Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. - All transportation within the mine lease area should be carried out directly under the supervision and control of management. - The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. - Navigation signs will be provided at each and every turning point up to the main road (wherever required). - To avoid danger while reversing the vehicles especially at working

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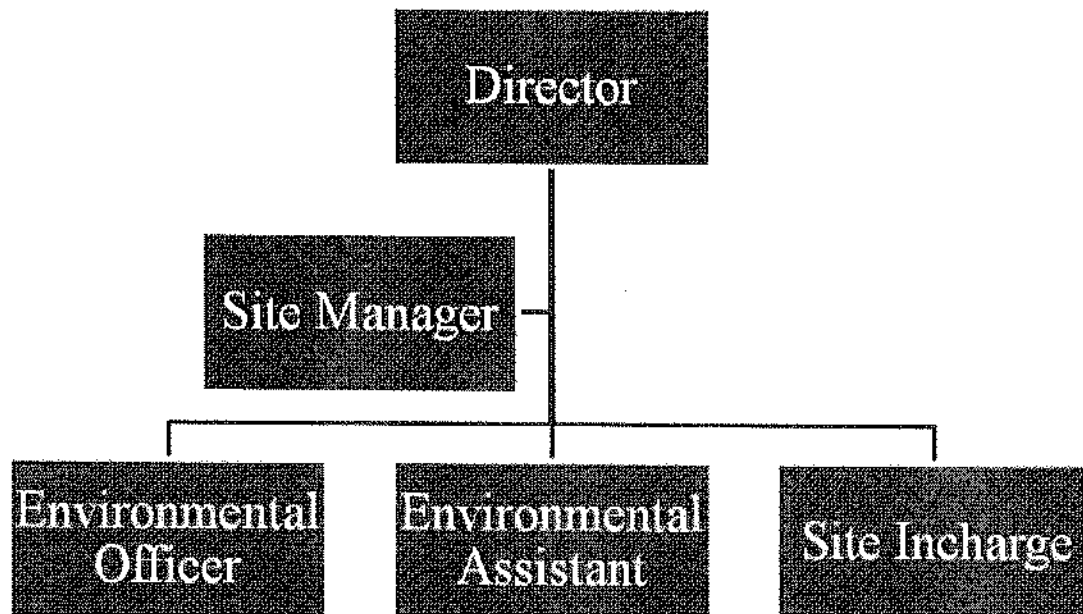
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	place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.

- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s Sony Bricks (Prop. : Shri Firoj Ahmad), Village : Risor, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.7466 Ha). is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

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- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

7. Ordinary Soil Mining of M/s Maa Bricks Enterprises (Prop. : Shri Ataruddin Shekh), Village : Fatehpur, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.742 Ha).

(Proposal no.: SIA/JH/MIN /585455 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity-1,200 cum. of soil/ Annum

Project and Location Details:

Sl. NO.	Parameter	Details	
1.	Project Name	: Ordinary soil Mining	
2.	Lessee:	: M/sMaa Bricks Enterprises, Proprietor: Shri Ataruddin Shekh	
3.	Lessee Address	: At Mauza- Fatehpur, Thana – Barharwa, District- Sahibganj, Jharkhand.	
4.	Mine Lease Area	: 0.742 ha	Acres-1.834Acre
5.	Type of Land	: Non-Forest – Raiyati Land	
6.	Project Cost	: RS- 26.83Lakh	

7.	EMP Budget	:	Capital: RS. –2.33Lakh	Recurring: RS – 2.16Lakh
8.	New or Expansion	:	New	
9.	Mineable Reserves	:	11401 CUM	
10.	Mine Life	:	10years only	
11.	Man power	:	10	
12.	Water Requirement	:	1.532 KLD (Drinking: 0.150 KLD, Dust Suppression:0.548KLD, Plantation:0.834KLD	
13.	Water Source	:	Tube well of nearby Villages	
14.	DG Set /power	:	-	
15.	Crusher	:	No crusher	
16.	Nearest Water Body	:	Few ponds are present within a distance of 260 m in the North West direction. (EMP Submitted)	
17.	Nearest Habitation	:	Few houses are at a distance of 100 m from the lease area in SouthEast direction(EMP submitted)	
18.	Nearest Rail Station	:	Kotalpukur Railway station is located at an aerial distance of approximately 4.26 km in the South-East (SE)Direction.	
19.	Nearest Airport	:	Nearest Airport is Deoghar Airport which is about 115 km SW	
20.	Nearest Forest	:	Divisional Forest Officer, Sahibganj, vide memo no.-365, Dated- 22.02.2024 certified that the distance of reserved Protected/forest is more than 250 meter (1200 m) from proposed project site.	
21.	Road & Highways	:	NH-133A, at 5.3 km West direction.	
22.	Approach road	:	Distance of Approach Road 137 m.	
23.	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	DFO Wildlife, Sahibganj, Letter no. - 998 Dated- 28.05.2024 certified that the proposed project site is outside Eco Sensitive Zone of Wildlife Sanctuary Udhwa. Udhwa Wildlife Sanctuary is located at a distance of 51.34 km.	

CO-ORDINATES

Point No.	Toposheet:G45V13	
Sl. No.	Latitude	Longitude
1	24° 45' 17.12493614" N	087° 47' 08.42798290" E
2	24° 45' 17.88736396" N	087° 47' 08.63270593" E
3	24° 45' 18.69006558" N	087° 47' 08.90947297" E







4	24° 45' 18.43915507" N	087° 47' 09.70847864" E
5	24° 45' 18.50766713" N	087° 47' 09.94179263" E
6	24° 45' 19.24859454" N	087° 47' 10.06724153" E
7	24° 45' 20.55760011" N	087° 47' 10.24028891" E
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9	24° 45' 22.55747384" N	087° 47' 10.26836480" E
10	24° 45' 23.57954900" N	087° 47' 10.08785380" E
11	24° 45' 24.09018288" N	087° 47' 09.95587356" E
12	24° 45' 24.90442349" N	087° 47' 09.91753232" E
13	24° 45' 24.74351452" N	087° 47' 10.52330349" E
14	24° 45' 24.58230575" N	087° 47' 11.09129700" E
15	24° 45' 24.13044077" N	087° 47' 11.15966660" E
16	24° 45' 23.51268687" N	087° 47' 11.18993574" E
17	24° 45' 22.55321900" N	087° 47' 11.25192316" E
18	24° 45' 22.44485067" N	087° 47' 11.35648799" E
19	24° 45' 21.33081161" N	087° 47' 11.36352380" E
20	24° 45' 20.70026725" N	087° 47' 11.19322690" E
21	24° 45' 20.01372357" N	087° 47' 10.94780073" E
22	24° 45' 19.13591289" N	087° 47' 10.75963538" E
23	24° 45' 18.35840440" N	087° 47' 10.64593557" E
24	24° 45' 17.73511476" N	087° 47' 10.39412374" E
25	24° 45' 17.16258846" N	087° 47' 10.07833318" E
26	24° 45' 17.14054698" N	087° 47' 09.28984618" E

LAND DETAILS

Khata no.	Plot no.
07 & 23	238 & 237

STATUTORY CLEARANCES

1	LOI / Lease docs	:	Lease agreement made.
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2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 151/Ra., dated 18.02.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatyan & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 160 meters and pond exists at a distance of 260 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 710/M, dated 07.05.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 998, dated 28.05.2024 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 365, dated 22.02.2024 certified that the distance of notified forest is 1200 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 712/M, dated 07.05.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 195).
7	Gram Sabha	:	Gram Sabha conducted on 09.02.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 979/M, dated 03.07.2026.
9	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Manual Mining method	
2	Quarry Area	:	0.6829ha	Life of Mine – 10Years
3	Waste Generation	:	0.0cum	
4	Stripping Ratio	:	0:0	
5	Working Days	:	200	
6	Benches: size & No	:	--	
7	Elevation of Mine	:	38m AMSL to 34 m AMSL	
8	Ground Level Elevation	:	34m AMSL	
9	Ultimate Working Depth	:	32 mAMSL	

10	Topography of Mine	:	Area represents plain to gently undulating terrain topography
11	Explosive Requirement	:	--
12	Diesel/Fuel requirement	:	--

Production Details

Year	Production of Recoverable Soil in Cum (Volume)
1 st	1,200
2 nd	1,200
3 rd	1,200
4 th	1,200
5 th	1,200
Total	6,000

Land use:

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period(Ha)	Land to be at the end of plan period. (Ha)	Area to be converted in the conceptual period (Ha)
1	Mining activity	0	0.3656	0.6829	Water Body
2	Safety zone	0	0.0591	0.0591	Plantation
3	Unutilized	0.742	0.3173	0	—
Total		0.742	0.742	0.742	

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.0591	95	1600 Tree per Hectare	1st Year	Arjun, Jackfruits, Jamun, Babul, Gulmohar, Neem,
Length of Approach Road Area (m.)	137 m	183	2m X 2 m spacing in two rows both side		

Dead Bench (Ha.)	-	-	1600 Tree per Hectare	At the end of life of mine	Pipal, Mango etc.
Backfilled (Ha.)	-	-			
Total		278			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Solid Waste Management

The top soil of depth 0.2 m and volume 1484 cum. Will be used for plantation purpose in the berm area and along the approach road.

EMP Cost-

Particulars	Capital(Rs.)	Recurring(Rs.)
278 Tree Plantation @Rs.300 per Tree for planting & @Rs.100 per tree for maintenance	83,400	27,800
Water Tanker @Rs. 500 per Tanker for Drinking (0.150) Dust Suppression (0.548 KLD) & Horticulture (0.834 KLD) Total water requirement- 1.532 KLD 1.532 KLD X 200 Days = 306.4 KL/ year 306.4 KLD / 4 KLD = 77 Tankers	0	38,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC (2% of project cost)	0	1,00,000
To prevent the impact of mining activities on water body, retaining wall will be constructed	1,50,000	0
Total	2,33,400	2,16,300

Project cost

Sl. No.	Head	Project Cost Rs. in Lakhs	Recurring Cost Rs. In Lakh
1.	Land Expenses & Other	15.00	1.5

2.	Temporary structures	3.0	0.5
3.	Manual Tools	0.50	--
4.	Operational Cost (Wages, Salary etc.)	--	2.00
5.	EMP	2.33	2.16
6.	Miscellaneous	2.00	--
7.	Statutory Clearance	4.00	--
Total		26.83	6.16

Environment Monitoring Programme:

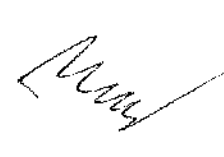
S. No.	Description	No. Monitoring Stations	Duration
1	Air	4 Stations	6 Monthly
2	Soil	2 Stations	6 Monthly
3	Surface Water	2 Stations	6 Monthly
4	Ground Water	2 Stations	6 Monthly
5	Noise	4 Stations	6 Monthly

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	The top soil of depth 0.2 m and volume 1484 cum. Will be used for plantation purpose in the berm area and along the approach road.
Air Quality Management	- Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	Sewage from rest shelters will be treated through septic tank-soak pit systems.
Noise Quality Management	- Mining activities will be restricted to daytime. - Greenbelt development around the lease boundary to attenuate noise propagation.
Soil Quality Management	- Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. - Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding

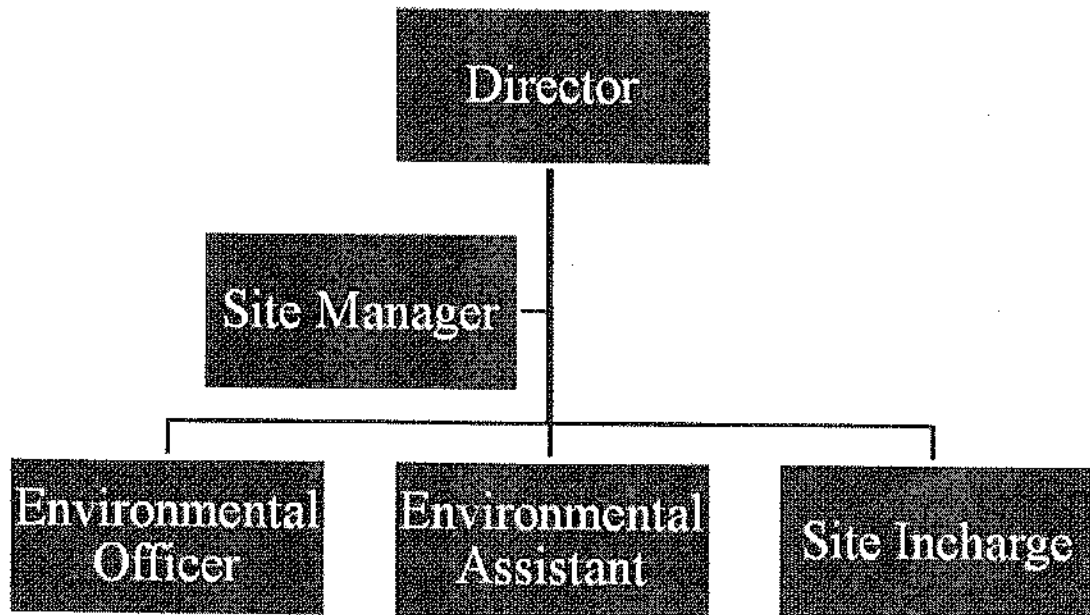
	vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	▪ Accidents due vehicles. ▪ Accidents at loading point.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.







Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.

- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ordinary Soil Mining of M/s Maa Bricks Enterprises (Prop. : Shri Ataruddin Shekh), Village : Fatehpur, Thana : Barharwa, Distt.: Sahibganj, Jharkhand (0.742 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.

- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

8. Mayapur Stone Deposit of M/s Golden Eagles Enterprises (Partner - Shri Taiyab Khan), Village : Mayapur, Thana : Peterwar, Distt.: Bokaro, Jharkhand (2.833 Ha).

(Proposal no.: SIA/JH/MIN /582269 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 1,13,228 cum/annum or 3,05,876 TPA.

Project and Location Details:

Sl. No.	Parameter	:	Details
1	Project Name	:	Mayapur Stone Mine
2	Applicant	:	M/s Golden Eagles Enterprises Partners: 1. Shri Taiyab Khan 2. Shri Firoz Alam 3. Shri Rakesh Sharma
3	Lease Address	:	Mouza- Mayapur, Thana- Peterwar, District- Bokaro, State- Jharkhand.
4	Lease Area	:	7.0 Acre Acres- 2.833 Ha
5	Cluster Details	:	NA
6	Type of Land	:	Non-Forest Raiyati Land
7	Project Cost	:	Rs. 136.44 Lakhs
8	EMP Budget	:	Capital: Rs. 20.52 lakhs Recurring: Rs. 7.02 Lakh / year

9	New or Expansion	:	New
10	Mineable Reserves	:	cum.: 11,30,100 cum Tonnes: 28,98,707 tones
11	Mine Life	:	10 years
12	Man power	:	29
13	Water Requirement	:	8.115 KLD {Manpower (29 nos.)- 1.015 KLD, Plantation (1782 nos.)- 5.3 KLD, Dust Suppression- 1.80 KLD}
14	Water Source	:	By authorised hired water tankers
15	DG Set / power	:	Nil. 20 KVA DG Set proposed
16	Crusher	:	No.
17	Nearest Water Body	:	Water pond is at a distance of 120m in northern direction, (EMP has been submitted.)
18	Nearest Habitation	:	Few habitations at a distance of 270m in north-eastern & 250 m in western direction. (EMP has been submitted.)
19	Nearest Rail Station	:	Bokaro Railway Station is located at an aerial distance of about 20.0 km in the east direction.
20	Nearest Air Port	:	Ranchi Airport is at aerial distance of 69.5 km in SW direction.
21	Nearest Forest	:	Divisional Forest Officer, Bokaro, vide memo no.-1292, Dated- 01/08/2025 certified that the distance of reserved Protected/forest is more than 950 meters from proposed project site.
22	Road & Highways	:	The approach road length is about 450 m, after which it connects to the village road. The village road further connects to the nearby major road network facilitating transportation of men, material, and mineral.
23	Approach Road	:	The distance of Approach Road is 450 m.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	DFO Wildlife Hazaribagh, Letter no.- 1806 Dated- 27.09.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath Wildlife Sanctuary. Parasnath Wildlife Sanctuary is located at a distance of 44.18 km.

CO-ORDINATES

Point Name	Latitude	Longitude
1	23° 40' 42.4219" N	85° 53' 02.2599" E
2	23° 40' 42.0580" N	85° 53' 02.9782" E
3	23° 40' 41.9317" N	85° 53' 03.3556" E
4	23° 40' 42.7732" N	85° 53' 03.2653" E
5	23° 40' 43.7021" N	85° 53' 03.1485" E
6	23° 40' 43.6985" N	85° 53' 02.6980" E
7	23° 40' 43.7811" N	85° 53' 02.5060" E

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8	23° 40' 43.8654" N	85° 53' 02.7783" E
9	23° 40' 44.0017" N	85° 53' 02.9291" E
10	23° 40' 44.2170" N	85° 53' 03.0055" E
11	23° 40' 44.4950" N	85° 53' 02.9957" E
12	23° 40' 44.6923" N	85° 53' 03.1877" E
13	23° 40' 44.8879" N	85° 53' 03.0043" E
14	23° 40' 45.1964" N	85° 53' 03.2190" E
15	23° 40' 45.4727" N	85° 53' 03.5207" E
16	23° 40' 45.0350" N	85° 53' 03.8399" E
17	23° 40' 44.7946" N	85° 53' 04.1200" E
18	23° 40' 44.2445" N	85° 53' 04.8292" E
19	23° 40' 44.1948" N	85° 53' 06.7918" E
20	23° 40' 44.1452" N	85° 53' 08.7544" E
21	23° 40' 43.8169" N	85° 53' 08.6369" E
22	23° 40' 43.3792" N	85° 53' 08.0532" E
23	23° 40' 43.1371" N	85° 53' 07.9846" E
24	23° 40' 42.7460" N	85° 53' 07.9416" E
25	23° 40' 42.3532" N	85° 53' 07.9807" E
26	23° 40' 42.1487" N	85° 53' 08.2843" E
27	23° 40' 42.1648" N	85° 53' 08.5644" E
28	23° 40' 42.3191" N	85° 53' 08.6996" E
29	23° 40' 42.5146" N	85° 53' 08.8504" E
30	23° 40' 42.5612" N	85° 53' 08.9562" E
31	23° 40' 42.3938" N	85° 53' 09.2806" E
32	23° 40' 42.2330" N	85° 53' 09.4361" E
33	23° 40' 41.8563" N	85° 53' 09.2892" E
34	23° 40' 41.5441" N	85° 53' 09.1168" E
35	23° 40' 41.0939" N	85° 53' 08.9914" E
36	23° 40' 41.1028" N	85° 53' 08.5703" E
37	23° 40' 40.8900" N	85° 53' 08.5606" E
38	23° 40' 40.7477" N	85° 53' 08.6526" E
39	23° 40' 40.4104" N	85° 53' 08.7995" E
40	23° 40' 39.8023" N	85° 53' 09.0522" E
41	23° 40' 39.3395" N	85° 53' 08.9372" E
42	23° 40' 39.5225" N	85° 53' 08.3176" E
43	23° 40' 39.6516" N	85° 53' 07.8808" E
44	23° 40' 39.7826" N	85° 53' 07.3030" E
45	23° 40' 39.6444" N	85° 53' 07.1443" E
46	23° 40' 39.2301" N	85° 53' 06.9759" E
47	23° 40' 38.6937" N	85° 53' 06.7663" E
48	23° 40' 38.6399" N	85° 53' 06.2688" E
49	23° 40' 38.6219" N	85° 53' 05.6714" E
50	23° 40' 38.8545" N	85° 53' 05.5098" E
51	23° 40' 38.9481" N	85° 53' 05.1870" E
52	23° 40' 38.6599" N	85° 53' 04.7566" E
53	23° 40' 38.4233" N	85° 53' 04.7395" E

54	23° 40' 38.2735" N	85° 53' 03.9537" E
55	23° 40' 38.1159" N	85° 53' 03.1260" E
56	23° 40' 38.2928" N	85° 53' 02.9920" E
57	23° 40' 39.0762" N	85° 53' 02.8952" E
58	23° 40' 39.7549" N	85° 53' 02.8153" E
59	23° 40' 41.2440" N	85° 53' 02.4893" E

LAND DETAILS

Khata no.	Plot no.
36	575, 897 (P) & 898

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Bokaro vide memo no. 344/Khanan, dated 13.03.2026.
2	CO	:	The CO, Peterwar (Bokaro) vide letter no. 489, dated 03.04.2025 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatyan & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 250 meters and pond exists at a distance of 150 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Bokaro vide memo no. 567/M, dated 24.04.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 1806, dated 27.09.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Bokaro Forest Division vide letter no. 1292, dated 01.08.2025 certified that the distance of notified forest is 950 meters from proposed project site.
6	DSR	:	The DMO, Bokaro has certified vide memo no. 824/M, dated 03.07.2026 that this project is mentioned in approved DSR of Bokaro District as a potential area (Page no. 113).
7	Gram Sabha	:	BDO, Peterwar vide letter no. 1055, dated 26.05.2025 informed that Gram Sabha conducted on 09.05.2025.
8	Mine Plan Approval	:	Approved by DMO – cum – DDM, Dhanbad Circle, Dhanbad vide Memo No. 80/DDM, dated 09.05.2026.

9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/64/2026/3191, dated : 20.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast semi-Mechanized method
2	Quarry Area	:	1.532 Ha
3	Waste Generation	:	42,000 cum of OB
4	Stripping Ratio	:	1:0.07
5	Working Days	:	300
6	Bench: size & No	:	6m x 6m
7	Elevation of Mine	:	343 m AMSL to 350 m AMSL
8	Ground Level Elevation	:	343 m AMSL
9	Ultimate Working Depth	:	284 m AMSL
10	Water Table	:	277 m AMSL (Source: JSAC Ground water Prospect Map)
11	Topography of Mine	:	The area represents a gently sloping land.
12	Explosive Requirement	:	117 kg/day of ANFO class III and Class IV explosive
13	Diesel/Fuel requirement	:	HSD – 356.46 liters / day (106.93 KL/year)

Production Details

Year	Production of Stone		Removal of OB
	In cum	In tones	Cum
1st	1,08,870	2,93,949	42,000
2nd	1,10,010	2,97,027	0
3rd	1,11,150	3,00,105	0
4th	1,12,290	3,03,183	0
5th	1,13,288	3,05,876	0
Total	5,55,608	15,00,140	42,000

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Land Use

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha.)	Land used at the conceptual stage i.e. end of plan period (Ha.)	Area to be converted in the conceptual period.
1	Excavation	0.000	1.532 (0.111 ha area shall be backfilled)	Water Body And backfilled area to be used in plantation
2	Waste dump	0.000	Nil (waste dump to be removed and backfilled)	Plantation
3	Road	0.000	0.000	-
4	Infrastructure	0.000	0.000	-
5	Safety Zone plantation	0.000	0.627	Plantation
6	Total	0.000	2.159	
7	Unused area	2.833	0.674	Plantation
Total		2.833	2.833	

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.627	1004	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	450	600	2m X 2 m spacing in two rows both side		
Plantation at backfilling	0.111	178	1600 Tree per Hectare	At the end of plan period	
Total		1782			

Note- 1782 trees proposed for plantation, out of which 10% (i.e. 179 trees) plantation will be carried out as per MoEF & CC, Govt. of India Scheme "Ek Ped Ma Ke Naam".

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be

undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Sl. No.	Head	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
1.	Government Revenue (Dead Rent & Royalty)	25.00	2.50
2.	Cost of Infrastructure	5.00	0.50
3.	Mining Machineries owned by applicant a. Rock Breakers -01 b. Compressor/ Wagon drill-01 c. Dumper-04 d. Water sprinklers Set-01	85.40	--
	Mining Machineries on hired basis (Excavator- 02)	--	10.0
4.	Lease Agreement (lump-sum)	--	0.82
5.	Statutory Clearance & Others	10.0	--
6.	Contingency	11.04	--
Total		136.44	11.32
Budget for Environment Management		20.52	7.02

ENVIRONMENT MANAGEMENT PLAN (EMP)

Sl. No.	Particulars	Capital Cost in Rs.	Recurring Cost in Rs. per year
1	Water facility for Dust Suppression, watering plants etc. (Rs. 500 per Tanker) $8.115 \text{ KLD} * 300 = 2434.5 \text{ KL/ Year}$ $2434.5/4 = 609 \text{ Tankers}$	--	3,04,500
2	Plantation $600 \times 800 = \text{Rs } 4,80,200$ (Gabion Plantation along approach road) $1182 \times 400 = 4,72,800$ (Plantation within lease area) (also includes Fertilizer, Pesticides, Maintenance)	9,52,800	95,000
3	Fencing	1,00,000	--
4	EMP cost (Habitation & water body)	10,00,000	1,00,000

5	Environmental Monitoring (One Day Monitoring) - Ambient Air 24 hrs (3 point) -Rs.27,270 - Ground Water (2 point) -Rs.12,420 - Noise 24 hrs (3 point) -Rs.21,000 - Soil (3 point) -Rs.40,920 Total -Rs. 1,01,610 (Per Season) At least two seasons in a Year -Rs. 1,01,610 x 2 = Rs. 2,03,220 Source: Central Pollution Control Board Notification, New Delhi, the 23rd February, 2022	--	2,03,220
Total		20,52,800	7,02,720

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, Nox in the vicinity of the mine area. In the surrounding area covering project site only.	4 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- Solid waste management is important from both aesthetic and environmental points of view and will be managed as per the Solid Waste Management Rules, 2016. - The O.B. dump area will accommodate 42,000 cum of overburden during the working plan period. - After completion of the working plan, the generated O.B. will be backfilled into the stone quarry faces. - Part of the O.B. will be used for haul road and village road maintenance. - The remaining O.B. will be utilized for plantation activities. - No hazardous or other solid waste generation is envisaged from the stone mining activities.

Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone).

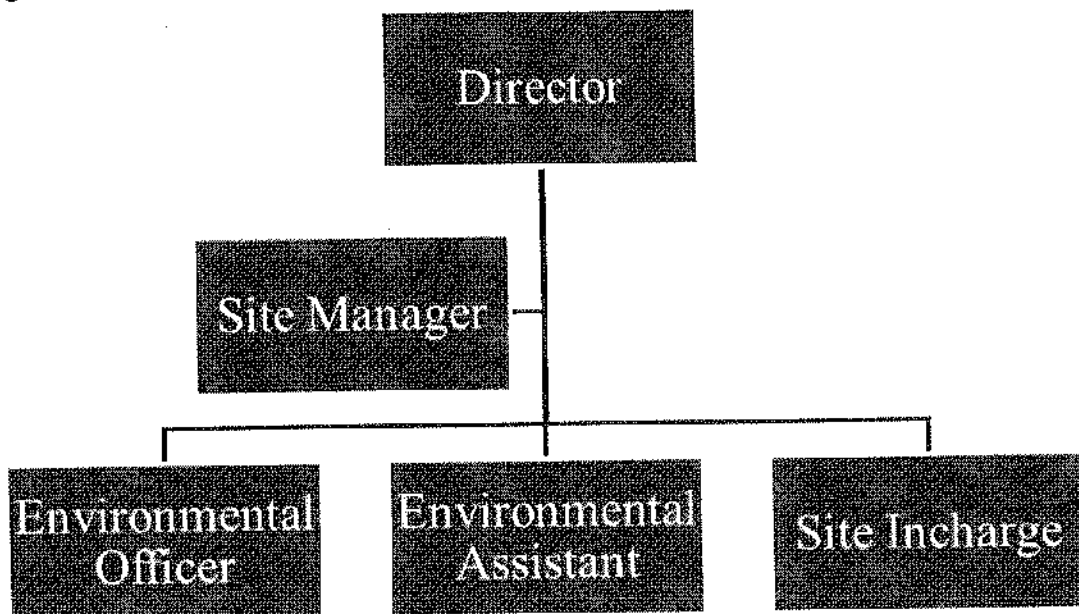
	Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: - Overall slope angles of benches will be maintained at 45°. - Unmanageable heights are not created. - Loose sides are properly dressed. - No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). - No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) - It will be ensured that the drilling equipment is suitable for the job. - The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. - Provision of portable rail fencing between the drilling operations and the edge of the bench - Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. - Restricted access to the area to all persons except those necessary for the drilling operation. - Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. - In case due to any reason, wet drilling is not possible (due to non-

		availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept.

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	The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and

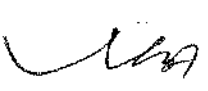
responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

A approved mine plan has been submitted by the PAs during appraisal of the project, whereas the draft copy of mine plan was uploaded on PARIVESH Portal alongwith the application. The QP and also the consultant has certified that the approved copy of the mine plan and the draft copy uploaded on the portal are the same and that the no material change between the two. This was also verified by the Committee.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Mayapur Stone Deposit of M/s Golden Eagles Enterprises (Partner - Shri Taiyab Khan), Village : Mayapur, Thana : Peterwar, Distt.: Bokaro, Jharkhand (2.833 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and

Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/64/2026/3191, dated : 20.08.2026 is also included as Annexure – I (A) :

- I. This project is being recommended to SEIAA as per provision of PARIVESH Portal 2.0 with a direction to Project Authority to upload the approved mine plan on PARIVESH Portal prior to next meeting of SEIAA.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby pond due to the mining activities
- III. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- IV. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- V. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- VI. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VII. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VIII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- IX. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- X. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- XI. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.



9. Kurunda Stone Mine of M/s Viraj Engicon Pvt. Ltd., Village : Kurunda, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.48 Ha).

(Proposal no.: SIA/JH/MIN/ 582399 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 124th meeting held on 23.06.2025 - 27.06.2025 and SEIAA, Jharkhand has approved the ToRs in 124th meeting held on 15th & 16th July, 2025. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2025-26/3804/2025/280, dated 23.07.2025. The final EIA / EMP submitted by PP to SEAC on 21.08.2026.

EC Application for: Proposed Capacity – 60,500 cum/annum or 1, 63,349 TPA.

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Kurunda Stone Deposit
2	Applicant	: M/s Viraj Engicon Pvt. Ltd.
3	Lease Address	: Mouza– Kurunda, Thana – Shikaripara, District – Dumka, State – Jharkhand
4	Lease Area	: 2.48 Ha Acres- 6.128 Acres
5	Cluster Details	: 2 numbers of mines including project site having total cluster area of 48.23 Acre (7 mines).
6	Type of Land	: Non-Forest Raiyati Land
7	Project Cost	: Rs. 178.64 Lakhs
8	EMP Budget	: Capital: Rs. 35.39 lakhs Recurring: Rs. 19.37 Lakh / year
9	New or Expansion	: New
10	Mineable Reserves	: cum.: 5,60,145 cum Tonnes: 15,12,391 tones
11	Mine Life	: 10 years
12	Man power	: 21
13	Water Requirement	: 10.089 KLD {Manpower (21 nos.)- 0.315 KLD, Plantation (2738 nos.)- 8.214 KLD, Dust Suppression- 1.56 KLD}
14	Water Source	: By authorised hired water tankers
15	DG Set / power	: 20 KVA (Emergency purpose)
16	Crusher	: Yes (250 TPH)
17	Nearest Water Body	: Water pond at distance of 260m in Eastern direction. (EMP has been submitted.)
18	Nearest	: There are some minor habitations at 330m in north direction

	Habitation	:	from the lease. (EMP has been submitted.)
19	Nearest Rail Station	:	Pinargaria Railway Station is at areal distance of 5.0 km NW direction.
20	Nearest Air Port	:	Deoghar Airport is at areal distance of 102 km NW direction
21	Nearest Forest	:	More than 500 m, (610 M) as per the Divisional Forest Officer, Dumka NOC, Letter No. 907 dated 22.04.2025.
22	Road & Highways	:	Kurunda Cluster Stone Mine can be approached by the NH-114A (Dumka-Rampurhat Road) at 2.20 km (aerial distance) N direction.
23	Approach Road	:	The distance of Approach Road is 270 m.
24	SE Budget	:	Capital cost: Rs. 6.3 Lakhs & Recurring cost: 2.6 Lakhs (Need Based Survey)
25	Eco Sensitive Zone (ESZ)	:	There are no national parks, wildlife sanctuaries, eco-sensitive zones present within the 10 km study area. Hazariabagh Wildlife Sanctuary is located at a distance of 232.5 km.

CO-ORDINATES

Point Name	Latitude	Longitude
1	24° 10' 37.00075225" N	087° 40' 14.04266187" E
2	24° 10' 36.84525645" N	087° 40' 14.29983772" E
3	24° 10' 36.72218409" N	087° 40' 14.25151335" E
4	24° 10' 36.46163798" N	087° 40' 14.75569761" E
5	24° 10' 36.15625952" N	087° 40' 15.35605382" E
6	24° 10' 36.04378413" N	087° 40' 15.88390852" E
7	24° 10' 36.04952445" N	087° 40' 16.03492217" E
8	24° 10' 35.91606845" N	087° 40' 16.50961608" E
9	24° 10' 35.91828050" N	087° 40' 17.15944201" E
10	24° 10' 35.89190408" N	087° 40' 17.79127348" E
11	24° 10' 35.86251361" N	087° 40' 17.96644933" E
12	24° 10' 36.00028142" N	087° 40' 18.02081424" E
13	24° 10' 36.08110519" N	087° 40' 18.09732783" E
14	24° 10' 35.94150049" N	087° 40' 18.44365248" E
15	24° 10' 35.72876398" N	087° 40' 19.26478925" E
16	24° 10' 36.13632710" N	087° 40' 19.30568878" E
17	24° 10' 36.07031338" N	087° 40' 19.74929140" E
18	24° 10' 35.64265905" N	087° 40' 19.71468410" E
19	24° 10' 35.57951543" N	087° 40' 19.88457447" E
20	24° 10' 35.98420851" N	087° 40' 20.04817259" E
21	24° 10' 36.27409483" N	087° 40' 20.20233237" E
22	24° 10' 36.69691939" N	087° 40' 20.49424521" E
23	24° 10' 36.99572171" N	087° 40' 20.72924942" E
24	24° 10' 37.24771712" N	087° 40' 21.04950692" E
25	24° 10' 37.49546528" N	087° 40' 21.48353244" E
26	24° 10' 37.54160283" N	087° 40' 21.68772610" E

27	24° 10' 37.47081029" N	087° 40' 22.30313954" E
28	24° 10' 36.92240626" N	087° 40' 22.20892635" E
29	24° 10' 37.00996908" N	087° 40' 22.65548219" E
30	24° 10' 37.06527005" N	087° 40' 23.22377679" E
31	24° 10' 37.08118789" N	087° 40' 23.68861857" E
32	24° 10' 36.80374249" N	087° 40' 23.66284557" E
33	24° 10' 36.15628262" N	087° 40' 23.90986529" E
34	24° 10' 36.00072522" N	087° 40' 23.51297559" E
35	087° 40' 23.51297559" E	087° 40' 23.17199883" E
36	24° 10' 36.35296684" N	087° 40' 23.01030549" E
37	24° 10' 36.27949073" N	087° 40' 22.60156186" E
38	24° 10' 36.12154089" N	087° 40' 22.62017865" E
39	24° 10' 36.07906843" N	087° 40' 22.28040776" E
40	24° 10' 36.07445001" N	087° 40' 21.98363169" E
41	24° 10' 35.84979929" N	087° 40' 21.81693194" E
42	24° 10' 35.93052136" N	087° 40' 21.70739653" E
43	24° 10' 35.83132853" N	087° 40' 21.47986928" E
44	24° 10' 36.04565736" N	087° 40' 21.17791624" E
45	24° 10' 35.32904685" N	087° 40' 20.79779030" E
46	24° 10' 35.07448092" N	087° 40' 21.40754720" E
47	24° 10' 34.73648979" N	087° 40' 21.69547991" E
48	24° 10' 34.65459902" N	087° 40' 21.96664205" E
49	24° 10' 34.37313272" N	087° 40' 21.85882582" E
50	24° 10' 34.35476361" N	087° 40' 21.78231223" E
51	24° 10' 33.77996616" N	087° 40' 21.60719335" E
52	24° 10' 33.32870682" N	087° 40' 21.41564018" E
53	24° 10' 32.93980085" N	087° 40' 20.77812383" E
54	24° 10' 33.18492312" N	087° 40' 20.51445124" E
55	24° 10' 33.25736423" N	087° 40' 20.19818151" E
56	24° 10' 32.36969937" N	087° 40' 19.76311752" E
57	24° 10' 32.44034785" N	087° 40' 19.37792365" E
58	24° 10' 32.36610276" N	087° 40' 18.92425756" E
59	24° 10' 32.21440686" N	087° 40' 18.58258505" E
60	24° 10' 32.64530051" N	087° 40' 17.88069402" E
61	24° 10' 33.02265053" N	087° 40' 17.12077284" E
62	24° 10' 32.65894106" N	087° 40' 16.73619140" E
63	24° 10' 33.13412835" N	087° 40' 15.88979131" E
64	24° 10' 33.51532401" N	087° 40' 15.05410375" E
65	24° 10' 33.91539075" N	087° 40' 14.11660782" E
66	24° 10' 34.28710817" N	087° 40' 12.96479645" E
67	24° 10' 34.97297339" N	087° 40' 13.05161923" E
68	24° 10' 35.69484094" N	087° 40' 13.47784018" E
69	24° 10' 36.55719214" N	087° 40' 14.00098693" E
70	24° 10' 36.64129578" N	087° 40' 13.86207047" E

LAND DETAILS

Khata no.	Plot no.
06, 08, 10, 11, 12, 14 & 15	268/P, 269, 270, 271 (P), 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290 (P), 405, 406, 419, 420, 421, 422, 423, 424, 426, 427, 428, 429, 430, 431, 433, 434, 435, & 436

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Dumka vide letter no. 702/M, dated 19.05.2025.
2	CO	:	The CO, Shikaripara vide letter no. 428/Ra., dated 10.05.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatyan & Register II.
3	DMO Cluster	:	DMO, Dumka vide memo no. 823/M, dated 17.06.2025 certified that 07 LoI (5.19 Acre, 7.37 Acre, 6.51 Acre, 5.98 Acre, 4.57 Acre, 7.06 Acre & 5.42 Acre) exists within 500 meters radius from proposed project site and total area is 48.23 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 813, dated 15.05.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Division Forest Officer, Dumka Forest Division vide letter no. 907, dated 22.04.2025 certified that the distance of notified forest is 710 meters from proposed project site.
6	DSR	:	The DMO, Dumka has been certified vide memo no. 822/M, dated 17.06.2025 that this project is mentioned in approved DSR of Dumka District as a potential area (Page no. 318, Sl. no. 60).
7	Gram Sabha	:	Gram Sabha conducted on 18.09.2024.
8	Mine Plan Approval	:	Approved by District Mining Officer, Dumka vide Letter No. 805/M, dated 10.06.2025.
9	Baseline monitoring period	:	December, 2024 to February, 2025.
10	Public Hearing	:	Public Hearing conducted on 24.04.2026.
11	Environmental	:	Environmental Safeguard issued by Environmental Engineer –

	Safeguard from Jharkhand State Pollution Control Board (JSPCB)	cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/69/2026/3185, dated : 19.08.2026.
12	Qualified Person	: Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	: Opencast Mechanized method
2	Quarry Area	: 1.523 Ha
3	Waste Generation	: 53924 Cum
4	Stripping Ratio	: 1:0.07
5	Working Days	: 300
6	Bench: size & No	: 6m x 6m
7	Elevation of Mine	: 63 m AMSL to 50 m AMSL
8	Ground Level Elevation	: 50 m AMSL
9	Ultimate Working Depth	: 25 m AMSL
10	Water Table	: 11 m AMSL (Source: JSAC Ground water Prospect Map)
11	Topography of Mine	: Area represents gently sloping land.
12	Explosive Requirement	: 53.46 kg/day Nitro mix explosives
13	Diesel/Fuel requirement	: HSD – 287.49 litre/day (86.247 KL/year)

Production Details

Year	Production of Stone		Removal of OB
	In cum	In tones	Cum
1 st	58877	158968	53924
2 nd	59109	159594	0
3 rd	56559	152710	0
4 th	60500	163349	0
5 th	59225	159907	0
Total	294270	794529	53924

Land Use

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period (Ha)	Land used at the conceptual stage i.e. end of mine life in (Ha)	Area to be converted in the conceptual period.
1	Mining Quarry	-	1.523	1.523	Water Body
2	Dumping	-	0.042	0.042	Plantation
3	Garland drain	-	0.047	0.00	-
4	Settling Pond	-	0.006	0.006	-
5	Safety Zone	-	0.763	0.810	Plantation
6	Crusher	-	0.099	0.099	Plantation
7	Unutilized	2.480	-	-	-
Total		2.480	2.480	2.480	

Green Belt Development

Year	Location	No. of Plants	Area to be Covered (Ha)	Species of Plant
1st Year	Approach Road	360	270 m	Mixed plants i.e. Mango, Guava, Saguan, Jackfruit, Gulmohar, Teak, Gamhar, etc. as available in the locality
1st Year	Safety Zone & Greenbelt	2025	0.810	
Conceptual	Dumping	105	0.042	
Conceptual	Crusher	248	0.099	
Total		2738	0.951 Ha.	

Note- 2738 trees proposed for plantation, out of which 10% (i.e. 273 trees) plantation will be carried out as per MoEF & CC, Govt. of India Scheme "Ek Ped Ma Ke Naam".

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Sl. No.	Head	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
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1.	Government Revenue (Dead Rent & Royalty)	27.00	0.00
2.	Cost of Infrastructure	5.00	0.50
3.	Mining Machineries owned by applicant • Wagon Drill -01 • Compressor-01 • Tippers 25 tons-03 • Diesel Pump-01 • D.G. Set-01	121.40	0.00
4.	Mining Machineries on hired basis (Excavator- 01, Tippers -03)	0.00	10.50
5.	Lease Agreement (lump-sum)	0.00	1.532
6.	Statutory Clearance & Others	9.00	0.00
7.	Contingency	16.34	0.00
Total		178.64	12.532
Budget for Environment Management		35.39	19.37

ENVIRONMENT MANAGEMENT PLAN (EMP)

Sl. No.	Particulars	Capital Cost in Rs.	Recurring Cost in Rs. per year
1	Water facility for Dust Suppression, watering plants etc. (Rs. 800 per Tanker)	--	2,40,000
2	Plantation 360 X 800 = Rs. 2,88,000 (Gabion Plantation along approach road) 2378 X 400 = 9,51,200 (Plantation within lease area) (also includes Fertilizer, Pesticides, Maintenance)	12,39,200	1,23,920
3	Fencing	1,00,000	--
4	Environmental Monitoring Ambient Air 24 hrs. (3 point) -Rs.27,270 Ground Water (2 point) -Rs.12,420 Noise 24 hrs. (3 point) -Rs.21,000 Soil (3 point) -Rs.40,920 Total -Rs. 1,01,610 (Per Season) At least two seasons in a Year -Rs. 1,01,610 x 2 = Rs. 2,03,220 Source: Central Pollution Control Board Notification, New Delhi, the 23rd February, 2022	--	2,03,220
5	Special EMP Cost (For Habitation & Water Body)	10,00,000	1,00,000
6	Public Hearing Budget	12,00,000	12,70,000
Total		35,39,200	19,37,140

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

Sl. No.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	8 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 6 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	8 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	5 stations	Six Monthly

Summary of Baseline Data:

Monitoring season – December 2024 to February 2025 for winter season.

Type	Parameter
AAQ Parameter at 8 locations	PM10 = 51 µg /m3 to 76 µg/m3 PM2.5 = 31 µg/m3 to 49 µg/m3 SO2 = 9.5 µg/m3 to 11.7 µg/m3 NOx = 14.6 µg/m3 to 23.6 µg/m3 CO = 0.63 mg/ m3 to 0.78 mg/m3
Noise quality at 8 locations	Daytime 53.8 (AN4) to 54.9 (AN6) dB(A) Night time 40 (AN2) to 42.3 (AN8) dB(A)
Surface water at 2 locations	pH – 7.09 (SW-2) to 7.27 (SW-1), TDS – 324 mg/l (SW-2) to 385 mg/l (SW-1) Sulphate – 15.85 mg/l and 21.06 mg/l Fluoride – 0.468 mg/l to 0.562 mg/l. Total Hardness – 162.9 to 174.6 mg/l
Ground water at 6 locations	Turbidity – 0.63 to 2.11 NTU pH – 6.99 to 7.81 Total Hardness – 106.7 to 272.4 mg/l TDS – 300 to 675 mg/l
Soil at 5 locations	pH – 5.37 to 6.61 Potassium -345 to 401 mg/kg Iron – 49.8 to 69.1 mg/kg

Public Hearing (Action Plan) –

Sl. No.	Issue Raised	Commitment by Project Proponent (Brief)	Time Frame	Funds to be Spent	
				Capital (in Lakhs)	Recurring (in Lakhs)
1	• Deep boring for drinking water • Tree plantation	Project proponent assured deep boring at identified locations by villagers and plantation along mining area & transport routes will be done.	•Deep boring – Within 6 months •Plantation – Immediate	•5.0 Lakhs •Under CSR	•1.0 Lakhs •Under CSR
2	• Construction of water tank	Project proponent assured that construction of water tank will be done	Water tank construction- Within 6 months	•Under CSR	•Under CSR
3	•Cleaning & leveling of football ground •PCC road, support during festivals •Water sprinkling for dust control	Project proponent assured that all works under CSR including ground leveling, Road repair and regular water sprinkling will be done.	•Football Ground levelling- Within 6 months •Road repair- Within 6 months •Water Sprinkling - Immediate	•Under CSR •5.0 Lakhs •Included in EMP cost	•Under CSR •1.5 Lakhs •Included in EMP cost
4	• Water sprinkling for dust control • Cleaning & leveling of football ground	Project proponent assured that all works under CSR including ground leveling, infrastructure, and regular water sprinkling will be done.	•Water Sprinkling – Immediate •Football Ground levelling- Within 6 months	•Included in EMP cost •Under CSR	•Included in EMP cost •Under CSR
5	• Repair of school under Sarva Shiksha Abhiyan • Drinking water & toilet facilities	Proponent assured that for repair of school under Sarva Shiksha Abhiyan will be requested to the concerned department and provision of water & sanitation will be provided.	•Repair of school- Immediate •Drinking water & Sanitation- within 6 months	•Under CSR	•Under CSR
6	• Fencing around mine • Water sprinkling for dust control • Employment priority for locals	Project proponent assured that fencing around the mines area, regular sprinkling for dust settlement, and employment based on eligibility & requirement will be provided.	•Fencing – within a month •Water Sprinkling – Immediate •Employment-	•Included in project cost •Included in EMP cost	•Included in project cost •Included in EMP cost

			Immediate		
7	• Fencing around mine • Dust control via water sprinkling • Support to villagers in need	Project proponent assured that fencing around the mines area, regular sprinkling for dust settlement will be done. And financial support will be provided under CSR activities when required.	• Fencing – within a month • Water Sprinkling – Immediate • Financial support- When required	• Included in project cost • Included in EMP cost • Under CSR activities	• Included in project cost • Included in EMP cost • Under CSR activities
8	• Deep boring • Repair of damaged hand pumps	Proponent assured that deep boring at identified location will be done and damaged hand pumps will be repaired.	• Deep boring- Within 6 months • Hand pump repair- within 6 months	• As above 2.0 Lakhs	• As above 0.20 Lakhs
9	• Financial assistance • Employment priority	Proponent assured that financial help under CSR activities will be provided when required, employment priority will be given to locals based on availability and eligibility will be provided.	• Financial support- When required • Employment- Immediate	• Under CSR activities	• Under CSR activities • 5.0 Lakhs
Total				12.0 Lakhs	12.7 Lakhs

SE Need based Survey detail (included in CSR)

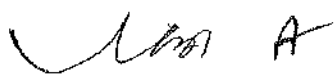
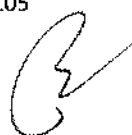
Zone	Coverage & Survey Details	Key Socio-Economic Observations	Workforce Characteristics	Priority Needs (Focused)	Proposed Budget		Implementation Timeline
					Capital (₹ Lakhs)	Recurring (₹ Lakhs)	
0-2 km	Villages: 4 Households surveyed: 18 Population covered: 88 FGDs Conducted: 2	Balanced gender composition with presence of children and vulnerable groups. Proximity to	Low workforce participation (~35%); dominance of informal and "other" occupations indicating livelihood	• Preventive healthcare & health check-ups • Local skill development linked to mine & allied activities	3.4	1.2	Short-term & ongoing (Year 1-2)

		mine increases sensitivity to dust, traffic and occupational health issues.	instability.				
2–5 km	Villages: 09 Households surveyed: 21 Population covered: 98 FGDs Conducted: 01	Moderate literacy levels with gender disparity; limited access to secondary education and structured training facilities.	Mixed workforce pattern; dependence on agriculture and daily wage labour.	- Education support (secondary level / scholarships). - Agricultural productivity support (inputs, awareness).	2.9	1.4	Medium-term (Year 2–3)
Total (0–5 km)					6.3	2.6	-

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- Solid waste management is important from both aesthetic and environmental points of view and will be managed as per the Solid Waste Management Rules, 2016. - An O.B. (Overburden) dump area of 0.042 ha has been provided within the lease area. - The O.B. dump area will accommodate 53924 cum of overburden during the working plan period. - After completion of the working plan, the generated O.B. will be backfilled into the stone quarry faces. - Part of the O.B. will be used for haul road and village road maintenance. - The remaining O.B. will be utilized for plantation activities. - No hazardous or other solid waste generation is envisaged from the stone mining activities.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. Greenbelt and roadside plantation to act as dust and noise barriers.

Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines.



		• All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard		Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961). ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench. ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast whole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather

	conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level.
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person

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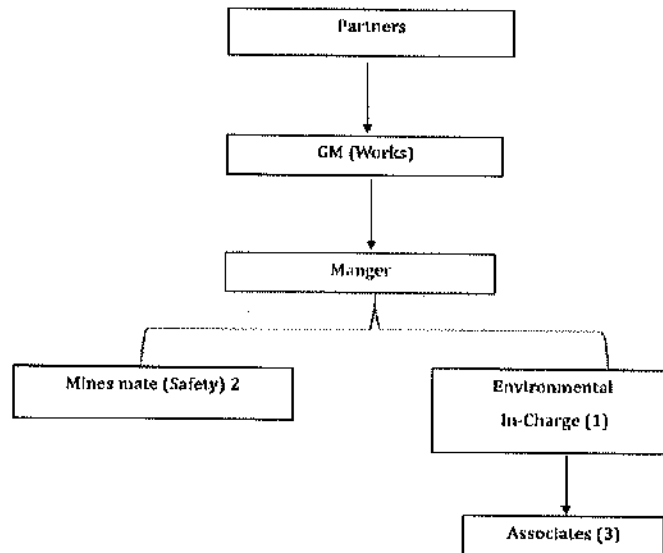
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	authorized for the purpose by the management. - Navigation signs will be provided at each and every turning point up to the main road (wherever required). - To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:

ORGANIZATION CHART OF ENVIRONMENTAL MONITORING CELL



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.

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- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Kurunda Stone Mine of M/s Virraaj Engicon Pvt. Ltd., Village : Kurunda, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.48 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/69/2026/3185, dated : 19.08.2026 is also included as Annexure – I (B) :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- III. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- IV. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

- V. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VI. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- VIII. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

10. Kurunda Stone Mine of M/s Tridev Engicon Pvt. Ltd., Village : Kurunda, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.42 Ha).

(Proposal no.: SIA/JH/MIN/ 582447 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 124th meeting held on 23.06.2025 - 27.06.2025 and SEIAA, Jharkhand has approved the ToRs in 124th meeting held on 15th & 16th July, 2025. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2025-26/3803/2025/288, dated 23.07.2025. The final EIA / EMP submitted by PP to SEAC on 21.08.2026.

EC Application for: Proposed Capacity – 74,594 cum/annum or 2, 01, 404 TPA.

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Kurunda Stone Mining
2	Applicant	: M/s Tridev Engicon Pvt. Ltd. (Director- Shri Ravi Shankar Kumar)

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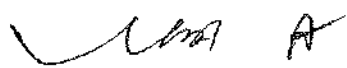
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3	Lease Address	:	Mouza- Kurunda, Thana – Shikaripara, District – Dumka, State – Jharkhand
4	Lease Area	:	2.42 Ha Acres- 5.98 Acres
5	Cluster Details	:	2 numbers of mines including project site having total cluster area 42.81 Acre (6 mines).
6	Type of Land	:	Non-Forest Raiyati Land
7	Project Cost	:	Rs. 178.64 Lakhs
8	EMP Budget	:	Capital: Rs. 32.19 lakhs Recurring: Rs. 19.66 Lakh / year
9	New or Expansion	:	New
10	Mineable Reserves	:	cum.: 6,43,929 cum Tonnes: 17,38,608 tones
11	Mine Life	:	10 years
12	Man power	:	22
13	Water Requirement	:	7.95 KLD {Manpower (22 nos.)- 0.33 KLD, Plantation (2020 nos.)- 6.06 KLD, Dust Suppression- 1.56 KLD}
14	Water Source	:	By authorised hired water tankers
15	DG Set / power	:	20 KVA (Emergency purpose)
16	Crusher	:	No.
17	Nearest Water Body	:	Water pond at a distance of 250 m in south-eastern direction. Brahmani River- 7.35 km. in N direction of mine site. (Special EMP has been submitted)
18	Nearest Habitation	:	There are some minor habitations at a distance of 400 m in north direction & 300 m in south-eastern direction. (Special EMP has been submitted)
19	Nearest Rail Station	:	Pinargaria Railway Station is at areal distance of 5.0 km NW direction.
20	Nearest Air Port	:	Deoghar Airport is at areal distance of 102 km NW direction
21	Nearest Forest	:	More than 250 m, as per Division Forest Officer, Dumka letter no. – 910 dated- 22/04/2025.
22	Road & Highways	:	Kurunda Cluster Stone Mine can be approached by the NH-114A (Dumka-Rampurhat Road) at 2.20 km (aerial distance) N direction.
23	Approach Road	:	The distance of Approach Road is 270 m.
24	SE Budget	:	Capital cost: Rs. 6.3 Lakhs & Recurring cost: 2.6 Lakhs (Need Based Survey)
25	Eco Sensitive Zone (ESZ)	:	There are no national parks, wildlife sanctuaries, eco-sensitive zones present within the 10 km study area. Hazaribagh Wildlife Sanctuary is located at a distance of 232.5 km.

CO-ORDINATES

Point Name	Latitude	Longitude
1	24° 10' 36.15628262" N	087° 40' 23.90986529" E
2	24° 10' 35.49769939" N	087° 40' 24.22781844" E
3	24° 10' 35.21315938" N	087° 40' 24.46876894" E
4	24° 10' 34.76146702" N	087° 40' 24.77305262" E
5	24° 10' 34.60500032" N	087° 40' 24.74377044" E
6	24° 10' 34.47333927" N	087° 40' 25.01985956" E
7	24° 10' 34.19856826" N	087° 40' 25.23738432" E
8	24° 10' 34.06499897" N	087° 40' 25.29385709" E
9	24° 10' 34.00584684" N	087° 40' 25.49255759" E
10	24° 10' 33.88372629" N	087° 40' 25.55321354" E
11	24° 10' 33.22954182" N	087° 40' 25.16032878" E
12	24° 10' 33.27706144" N	087° 40' 24.82135985" E
13	24° 10' 32.83799108" N	087° 40' 24.78937590" E
14	24° 10' 32.78368580" N	087° 40' 24.87462518" E
15	24° 10' 32.16354040" N	087° 40' 24.93671908" E
16	24° 10' 31.64357169" N	087° 40' 24.86514740" E
17	24° 10' 30.65491395" N	087° 40' 24.91057428" E
18	24° 10' 29.86174992" N	087° 40' 24.98432568" E
19	24° 10' 29.24467170" N	087° 40' 25.06417500" E
20	24° 10' 28.89606529" N	087° 40' 25.16861414" E
21	24° 10' 28.42225382" N	087° 40' 25.03001704" E
22	24° 10' 28.33471675" N	087° 40' 24.85182075" E
23	24° 10' 28.74700125" N	087° 40' 24.79396846" E
24	24° 10' 28.64586901" N	087° 40' 24.59526796" E
25	24° 10' 29.14617086" N	087° 40' 24.33855453" E
26	24° 10' 29.54861961" N	087° 40' 24.35081978" E
27	24° 10' 29.46446704" N	087° 40' 23.72726050" E
28	24° 10' 29.39488681" N	087° 40' 23.50240274" E
29	24° 10' 29.25209879" N	087° 40' 23.48629521" E
30	24° 10' 29.23484939" N	087° 40' 23.37989642" E
31	24° 10' 29.39766576" N	087° 40' 23.35771345" E
32	24° 10' 29.31563114" N	087° 40' 23.13115899" E
33	24° 10' 29.20364568" N	087° 40' 22.88304253" E
34	24° 10' 29.18873823" N	087° 40' 22.59871780" E
35	24° 10' 29.11348616" N	087° 40' 22.34184739" E
36	24° 10' 28.88356001" N	087° 40' 21.64581069" E
37	24° 10' 28.65433645" N	087° 40' 21.65881442" E
38	24° 10' 28.14748235" N	087° 40' 21.92026245" E
39	24° 10' 27.36624995" N	087° 40' 22.31290447" E
40	24° 10' 27.16199628" N	087° 40' 22.02809503" E
41	24° 10' 28.37918002" N	087° 40' 21.42953828" E
42	24° 10' 29.21147618" N	087° 40' 21.19803542" E
43	24° 10' 29.74546995" N	087° 40' 20.87935465" E
44	24° 10' 30.56942680" N	087° 40' 20.39807238" E





45	24° 10' 30.91290160" N	087° 40' 20.06263433" E
46	24° 10' 31.42422072" N	087° 40' 19.69352196" E
47	24° 10' 31.80639987" N	087° 40' 19.75104732" E
48	24° 10' 31.87731916" N	087° 40' 20.07378574" E
49	24° 10' 32.30918844" N	087° 40' 20.03357501" E
50	24° 10' 32.46619800" N	087° 40' 20.18283344" E
51	24° 10' 32.67933447" N	087° 40' 20.24372696" E
52	24° 10' 32.74213162" N	087° 40' 20.42837463" E
53	24° 10' 32.62864953" N	087° 40' 20.81891262" E
54	24° 10' 32.99361100" N	087° 40' 21.54681276" E
55	24° 10' 33.18614612" N	087° 40' 21.49527291" E
56	24° 10' 33.32870682" N	087° 40' 21.41564018" E
57	24° 10' 33.77996616" N	087° 40' 21.60719335" E
58	24° 10' 34.35476361" N	087° 40' 21.78231223" E
59	24° 10' 34.37313272" N	087° 40' 21.85882582" E
60	24° 10' 34.12628820" N	087° 40' 22.16501441" E
61	24° 10' 34.43525296" N	087° 40' 22.37517679" E
62	24° 10' 34.60881658" N	087° 40' 22.10628272" E
63	24° 10' 34.65459902" N	087° 40' 21.96664205" E
64	24° 10' 34.73648979" N	087° 40' 21.69547991" E
65	24° 10' 35.07448092" N	087° 40' 21.40754720" E
66	24° 10' 35.32904685" N	087° 40' 20.79779030" E
67	24° 10' 36.04565736" N	087° 40' 21.17791624" E
68	24° 10' 35.83132853" N	087° 40' 21.47986928" E
69	24° 10' 35.93052136" N	087° 40' 21.70739653" E
70	24° 10' 35.84979929" N	087° 40' 21.81693194" E
71	24° 10' 36.07446001" N	087° 40' 21.98363169" E
72	24° 10' 36.07906843" N	087° 40' 22.28040776" E
73	24° 10' 36.12154089" N	087° 40' 22.62017865" E
74	24° 10' 36.27949073" N	087° 40' 22.60156186" E
75	24° 10' 36.35296684" N	087° 40' 23.01030549" E
76	24° 10' 35.82330084" N	087° 40' 23.17199883" E
77	24° 10' 36.00072522" N	087° 40' 23.51297559" E

LAND DETAILS

Khata no.	Plot no.
2, 3, 6, 7, 8, 10, 11, 12, 13, 14 & 15	409, 410, 411, 414, 415, 416, 417, 418, 440, 441, 443, 444, 445, 446, 447, 448, 449, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519 & 520

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (Loi) has been issued by District Mining Officer, Dumka vide letter no. 701/M, dated 19.05.2025.
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2	CO	:	The CO, Shikaripara vide letter no. 427/Ra., dated 10.05.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyon & Register II.
3	DMO Cluster	:	DMO, Dumka vide memo no. 825/M, dated 17.06.2025 certified that 06 Lol (6.13 Acre, 4.57 Acre, 7.06 Acre, , 7.37 Acre, 6.51 Acre & 5.19 Acre) exists within 500 meters radius from proposed project site and total area is 42.81 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 815, dated 15.05.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Division Forest Officer, Dumka Forest Division vide letter no. 910, dated 22.04.2025 certified that the distance of notified forest is 835 meters from proposed project site.
6	DSR	:	The DMO, Dumka has been certified vide memo no. 824/M, dated 17.06.2025 that this project is mentioned in approved DSR of Dumka District as a potential area (Page no. 318, Sl. no. 60).
7	Gram Sabha	:	Gram Sabha conducted on 18.09.2024.
8	Mine Plan Approval	:	Approved by District Mining Officer, Dumka vide Letter No. 802/M, dated 10.06.2025.
9	Baseline monitoring period	:	December, 2024 to February, 2025.
10	Public Hearing	:	Public Hearing conducted on 24.04.2026.
11	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/70/2026/3183, dated : 19.08.2026.
12	Qualified Person	:	Shri Malay Kumar Mukhopadhyay was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Mechanized method
2	Quarry Area	:	1.756 Ha
3	Waste Generation	:	34450 Cum
4	Stripping Ratio	:	1:0.04
5	Working Days	:	300

6	Benches: size & No	:	6m x 6m
7	Elevation of Mine	:	56 m AMSL to 60 m AMSL
8	Ground Level Elevation	:	56 m AMSL
9	Ultimate Working Depth	:	16 m AMSL
10	Water Table	:	11 m AMSL (Source: JSAC Ground water Prospect Map)
11	Topography of Mine	:	Area represents gently sloping land.
12	Explosive Requirement	:	64.452 kg/day Nitro mix explosives.
13	Diesel/Fuel requirement	:	HSD – 301.35 litre/day (90.405 KL/year)

Production Details

Year	Production of Stone		Removal of OB
	In cum	In tones	Cum
1 st	66690	180063	34450
2 nd	64220	173394	0
3 rd	65455	176729	0
4 th	74594	201404	0
5 th	67925	183398	0
Total	338884	914987	34450

Land Use

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha)	Proposed Land use for current plan period (Ha)	Land used at the conceptual stage i.e. end of mine life in (Ha)	Area to be converted in the conceptual period.
1	Mining Quarry	0.00	1.037	1.756	Water Body
2	Dumping	0.00	0.100	0.00	-
3	Garland drain	0.00	0.033	0.033	-
4	Safety Zone	0.00	0.631	0.664	Plantation
5	Unutilized	2.420	0.619	0	-
Total		2.420	2.420	2.420	

Green Belt Development

Year	Location	No. of Plants	Area to be Covered (Ha)	Species of Plant
1st Year	Approach Road	360	270 m	Mixed plants i.e. Mango, Guava, Saguan, Jackfruit, Gulmohar, Teak, Gamhar, etc. as available in the locality
1st Year	Safety Zone	1660	0.664	
Total		2020	0.664 Ha.	

Note- 1938 trees proposed for plantation, out of which 10% (i.e. 193 trees) plantation will be carried out as per MoEF & CC, Govt. of India Scheme "Ek Ped Ma Ke Naam".

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN LAKHS) PROJECT COST

Sl. No.	Head	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
1.	Government Revenue (Dead Rent & Royalty)	27.00	0.00
2.	Cost of Infrastructure	5.00	0.50
3.	Mining Machineries owned by applicant • Wagon Drill -01 • Compressor-01 • Tippers 25 tons-03 • Diesel Pump-01 • D.G. Set-01	121.40	0.00
4.	Mining Machineries on hired basis (Excavator- 01, Tippers -03)	0.00	13.00
5.	Lease Agreement (lump-sum)	0.00	1.495
6.	Statutory Clearance & Others	9.00	0.00
7.	Contingency	16.24	0.00
Total		178.64	14.995
Budget for Environment Management		32.19	19.66

ENVIRONMENT MANAGEMENT PLAN (EMP)

Sl. No.	Particulars	Capital Cost in Rs.	Recurring Cost in Rs. per year
1	Water facility for Dust Suppression, watering plants etc. (Rs. 500 per Tanker) 7.95*300 days= 2385 KL/year 2385/4 = 597 Tankers	--	2,98,500
2	Plantation 360 X 800 = Rs. 2,88,000 (Gabion Plantation along approach road) 1660 X 400 = 6,64,000 (Plantation within lease area) (also includes Fertilizer, Pesticides, Maintenance)	9,52,000	95,000
3	Fencing	1,00,000	--
4	Environmental Monitoring Ambient Air 24 hrs. (3 point) -Rs.27,270 Ground Water (2 point) -Rs.12,420 Noise 24 hrs. (3 point) -Rs.21,000 Soil (3 point) -Rs.40,920 Total -Rs. 1,01,610 (Per Season) At least two seasons in a Year -Rs. 1,01,610 x 2 = Rs. 2,03,220 Source: Central Pollution Control Board Notification, New Delhi, the 23rd February, 2022	--	2,03,220
5	EMP Cost (For Habitation & Water Body)	10,00,000	1,00,000
6	Public Hearing Budget	12,00,000	12,70,000
Total		32,19,200	19,66,720

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

Sl. No.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	8 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 6 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	8 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity,	5 stations	Six Monthly

	texture, water holding capacity, etc.		
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Summary of Baseline Data:

Monitoring season – December 2024 to February 2025 for winter season.

Type	Parameter
AAQ Parameter at 8 locations	PM10 = 51 µg /m3 to 76 µg/m3 PM2.5 = 31 µg/m3 to 49 µg/m3 SO2 = 9.5 µg/m3 to 11.7 µg/m3 NOx = 14.6 µg/m3 to 23.6 µg/m3 CO= 0.63 mg/ m3 to 0.78 mg/m3
Noise quality at 8 locations	Daytime 53.8 (AN4) to 54.9 (AN6) dB(A) Night time 40 (AN2) to 42.3 (AN8) dB(A)
Surface water at 2 locations	pH – 7.09 (SW-2) to 7.27 (SW-1), TDS – 324 mg/l (SW-2) to 385 mg/l (SW-1) Sulphate – 15.85 mg/l and 21.06 mg/l Fluoride – 0.468 mg/l to 0.562 mg/l.
Ground water at 6 locations	Turbidity – 0.63 to 2.11 NTU pH – 6.99 to 7.81 Total Hardness – 106.7 to 272.4 mg/l TDS – 300 to 675 mg/l
Soil at 5 locations	pH – 5.37 to 6.61 Potassium -345 to 401 mg/kg Iron – 49.8 to 69.1 mg/kg

Public Hearing (Action Plan) –

Sl. No.	Issue Raised	Commitment by Project Proponent (Brief)	Time Frame	Funds to be Spent	
				Capital (in Lakhs)	Recurring (in Lakhs)
1	- Deep boring for drinking water - Tree plantation	Project proponent assured deep boring at identified locations by villagers and plantation along mining area & transport routes will be done.	- Deep boring – Within 6 months - Plantation – Immediate	5.0 Lakhs - Under CSR	1.0 Lakhs - Under CSR
2	Construction of water tank	Project proponent assured that construction of water tank will be done	Water tank construction- Within 6 months	Under CSR	Under CSR

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3	• Cleaning & leveling of football ground • PCC road, support during festivals • Water sprinkling for dust control	Project proponent assured that all works under CSR including ground leveling, Road repair and regular water sprinkling will be done.	• Football Ground levelling- Within 6 months • Road repair- Within 6 months • Water Sprinkling - Immediate	• Under CSR • 5.0 Lakhs • Included in EMP cost	• Under CSR • 1.5 Lakhs • Included in EMP cost
4	• Water sprinkling for dust control • Cleaning & leveling of football ground	Project proponent assured that all works under CSR including ground leveling, infrastructure, and regular water sprinkling will be done.	• Water Sprinkling – Immediate • Football Ground levelling- Within 6 months	• Included in EMP cost • Under CSR	• Included in EMP cost • Under CSR
5	• Repair of school under Sarva Shiksha Abhiyan • Drinking water & toilet facilities	Proponent assured that for repair of school under Sarva Shiksha Abhiyan will be requested to the concerned department and provision of water & sanitation will be provided.	• Repair of school- Immediate • Drinking water & Sanitation- within 6 months	• Under CSR	• Under CSR
6	• Fencing around mine • Water sprinkling for dust control • Employment priority for locals	Project proponent assured that fencing around the mines area, regular sprinkling for dust settlement, and employment based on eligibility & requirement will be provided.	• Fencing – within a month • Water Sprinkling – Immediate • Employment- Immediate	• Included in project cost • Included in EMP cost	• Included in project cost • Included in EMP cost
7	• Fencing around mine • Dust control via water sprinkling • Support to villagers in need	Project proponent assured that fencing around the mines area, regular sprinkling for dust settlement will be done. And financial support will be provided under CSR activities when required.	• Fencing – within a month • Water Sprinkling – Immediate • Financial support- When required	• Included in project cost • Included in EMP cost • Under CSR activities	• Included in project cost • Included in EMP cost • Under CSR activities

8	• Deep boring • Repair of damaged hand pumps	Proponent assured that deep boring at identified location will be done and damaged handpumps will be repaired.	•Deep boring- Within 6 months •Handpump repair- within 6 months	•As above 2.0 Lakhs	•As above 0.20 Lakhs
9	• Financial assistance • Employment priority	Proponent assured that financial help under CSR activities will be provided when required, employment priority will be given to locals based on availability and eligibility will be provided.	•Financial support- When required •Employment- Immediate	•Under CSR activities	•Under CSR activities •5.0 Lakhs
Total				12.0 Lakhs	12.7 Lakhs

SE Need based Survey detail (included in CSR)

Zone	Coverage & Survey Details	Key Socio-Economic Observations	Workforce Characteristics	Priority Needs (Focused)	Proposed Budget		Implementation Timeline
					Capital (₹ Lakhs)	Recurring (₹ Lakhs)	
0–2 km	Villages: 4 Households surveyed: 18 Population covered: 88 FGDs Conducted: 2	Balanced gender composition with presence of children and vulnerable groups. Proximity to mine increases sensitivity to dust, traffic and occupational health issues.	Low workforce participation (~35%); dominance of informal and "other" occupations indicating livelihood instability.	• Preventive healthcare & health check-ups • Local skill development linked to mine & allied activities	3.4	1.2	Short-term & ongoing (Year 1–2)
2–5 km	Villages: 09 Households surveyed: 21 Population covered: 98 FGDs Conducted:	Moderate literacy levels with gender disparity; limited access to secondary education and	Mixed workforce pattern; dependence on agriculture and daily wage labour.	• Education support (secondary level / scholarships). • Agricultural productivity	2.9	1.4	Medium-term (Year 2–3)

	01	structured training facilities.		support (inputs, awareness).			
Total (0-5 km)					6.3	2.6	-

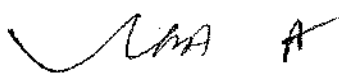
Environment Management Practices to be followed:

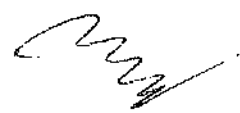
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	• Solid waste management is important from both aesthetic and environmental points of view and will be managed as per the Solid Waste Management Rules, 2016. • An O.B. (Overburden) dump area of 0.100 ha has been provided within the lease area. • The O.B. dump area will accommodate 34450 cum of overburden during the working plan period. • After completion of the working plan, the generated O.B. will be backfilled into the stone quarry faces. • Part of the O.B. will be used for haul road and village road maintenance. • The remaining O.B. will be utilized for plantation activities. • No hazardous or other solid waste generation is envisaged from the stone mining activities.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration

	and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any

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		inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting Handling Explosives	& of	▪ Blast whole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise

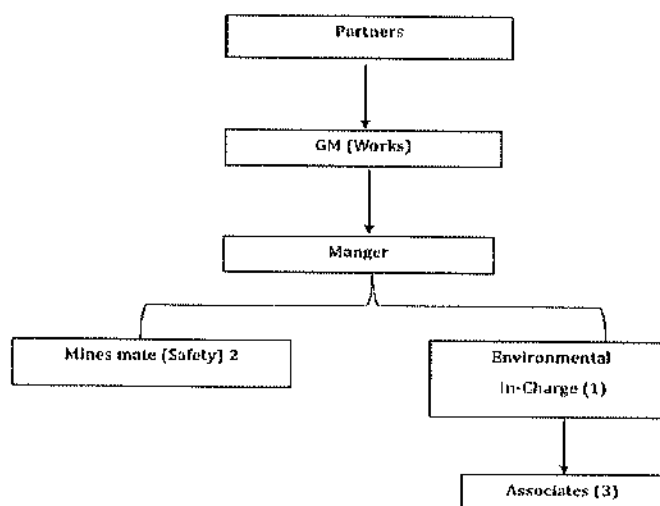




	which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level.
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:

ORGANIZATION CHART OF ENVIRONMENTAL MONITORING CELL



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Kurunda Stone Mine of M/s Tridev Engicon Pvt.

Ltd., Village : Kurunda, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.42 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/70/2026/3183, dated : 19.08.2026 is also included as Annexure – I (C) :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- III. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- IV. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- V. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VI. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- VIII. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

11. Amchua Stone Deposit of Mr. Rashid Akhtar, Village : Amchua, Thana : Shikaripara, Distt. : Dumka, Jharkhand (1.74 Ha).

(Proposal no.: SIA/JH/ MIN/ 582476 /2026)

Name of the consultant : Sathi Planners Pvt. Ltd., Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 119th meeting held on 17.12.2024 - 22.12.2024 and SEIAA, Jharkhand has approved the ToRs in 119th meeting held on 30th & 31st December, 2024. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2024-25/3431/2024/512, dated 13.01.2025. The final EIA / EMP submitted by PP to SEAC on 21.08.2026.

EC Application for: Proposed Capacity – 40,869.1 cum/annum or 1, 10,346.7 TPA.

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Amchua Stone Mine
2	Applicant	: Rashid Akhtar and Hans Raj
3	Lease Address	: Mouza- Amchua, Thana- Shikaripara, Thana No.- 30, District- Dumka, State- Jharkhand
4	Lease Area	: 1.74 Ha Acres- 4.29 Acres
5	Cluster Details	: 2 numbers of mines including project site having total cluster area 18.13 Acres (7.34 Ha.)
6	Type of Land	: Non-Forest Raiyati Land
7	Project Cost	: Rs. 130.9 Lakhs Recurring: Rs. 8.44 lakh/ year
8	EMP Budget	: Capital: Rs. 30.61 lakhs Recurring: Rs. 8.36 Lakh / year
9	New or Expansion	: New
10	Mineable Reserves	: cum.: 1,95,843.7 cum Tonnes: 5,28,777.9 Tons
11	Mine Life	: 5 years
12	Man power	: 20
13	Water Requirement	: 6.476 KLD {Manpower (20 nos.)- 0.30 KLD, Plantation (1592 nos.)- 4.776 KLD, Dust Suppression- 1.40 KLD}
14	Water Source	: By authorised hired water tankers
15	DG Set / power	: 60 KVA (Emergency purpose)
16	Crusher	: No.
17	Nearest Water Body	: Kanoor Nala (Seasonal) at a distance of 50 m in southern direction. (EMP has been submitted)

18	Nearest Habitation	:	There are some few habitations at a distance of 510 m in north of north-west direction.
19	Nearest Rail Station	:	Pinagaria Railway Station at aerial distance of 5.30 km at NE direction.
20	Nearest Air Port	:	Deoghar Airport is at aerial distance of 97 km at North West direction.
21	Nearest Forest	:	More than 500 m, (2242 m) as per the Divisional Forest Officer NOC, Letter No. 2050 dated 04.09.2024.
22	Road & Highways	:	The length of the approach road of nearly about 350 m km, after which it connects to Village Road.
23	Approach Road	:	The distance of Approach Road is 350 m.
24	SE Budget	:	Capital cost: Rs. 6.4 Lakhs & Recurring cost: 2.5 Lakhs (Need Based Survey).
25	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	Parasnath and Topchanchi Wildlife Sanctuary- No Wildlife Sanctuary within 15 kms. Parasnath and Topchanchi Wildlife Sanctuary is at a distance of 152.8 km.

CO-ORDINATES

Pillar No.	Latitude	Longitude
P1	24°10'4.063" N	87°37'7.700" E
P2	24°10'3.490" N	87°37'8.098" E
P3	24°10'3.281" N	87°37'7.533" E
P4	24°10'3.012" N	87°37'7.662" E
P5	24°10'3.129" N	87°37'8.264" E
P6	24°10'2.019" N	87°37'8.708" E
P7	24°10'1.489" N	87°37'8.417" E
P8	24°10'0.299" N	87°37'8.281" E
P9	24°10'0.366" N	87°37'8.717" E
P10	24°10'1.170" N	87°37'8.953" E
P11	24°10'1.112" N	87°37'9.120" E
P12	24°9'59.870" N	87°37'8.635" E
P13	24°9'58.833" N	87°37'8.263" E
P14	24°9'57.630" N	87°37'7.933" E
P15	24°9'56.363" N	87°37'7.665" E
P16	24°9'55.376" N	87°37'7.456" E
P17	24°9'54.246" N	87°37'7.217" E
P18	24°9'54.407" N	87°37'7.040" E
P19	24°9'55.822" N	87°37'6.839" E
P20	24°9'56.286" N	87°37'6.657" E
P21	24°9'56.295" N	87°37'6.498" E
P22	24°9'56.899" N	87°37'5.927" E
P23	24°9'58.348" N	87°37'5.405" E
P24	24°9'59.931" N	87°37'5.917" E

P25	24°9'59.766" N	87°37'6.437" E
P26	24°10'0.415" N	87°37'6.590" E
P27	24°10'0.551" N	87°37'6.092" E
P28	24°10'0.323" N	87°37'4.774" E
P29	24°10'0.471" N	87°37'4.554" E
P30	24°10'0.890" N	87°37'4.826" E
P31	24°10'0.942" N	87°37'4.540" E
P32	24°10'1.633" N	87°37'5.002" E
P33	24°10'2.493" N	87°37'5.738" E
P34	24°10'3.323" N	87°37'6.604" E
P35	24°10'3.697" N	87°37'6.896" E
P36	24°10'3.709" N	87°37'7.221" E

LAND DETAILS

Khata no.	Plot no.
40, 04, 22, 21 & 09	1573P, 1575, 1576, 1577, 1578, 1579, 1580P, 1581P, 1611, 1612P, 1613, 1616P, 1633P, 1634P

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Dumka vide letter no. 1153/M, dated 09.10.2024.
2	CO	:	The CO, Shikaripara vide letter no. 894/Ra., dated 08.10.2024 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatyan & Register II.
3	DMO Cluster	:	DMO, Dumka vide memo no. 1316/M, dated 02.12.2024 certified that 02 other mining lease area (6.99 Acre & 6.84 Acre) exists within 500 meters radius from proposed project site and total area is 18.13 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 2128, dated 01.10.2024 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Dumka Forest Division vide letter no. 2050, dated 04.09.2024 certified that the distance of notified forest is 2242 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Dumka District (Sl. no. 38).
7	Gram Sabha	:	Gram Sabha conducted on 24.06.2024.

8	Mine Plan Approval	:	Approved by District Mining Officer, Dumka vide Letter No. 1287/M, dated 18.11.2024.
9	Baseline monitoring period	:	December, 2024 to February, 2025.
10	Public Hearing	:	Public Hearing conducted on 21.04.2026.
11	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/62/2026/3184, dated : 19.08.2026.
12	Qualified Person	:	Shri Sandip Ghosh was present during 119 th meeting of SEAC held on 17.12.2024 - 22.12.2024 and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Semi-Mechanized method
2	Quarry Area	:	1.11 Ha
3	Waste Generation	:	29873.3 cum.
4	Stripping Ratio	:	1:0.05
5	Working Days	:	300
6	Benches: size & No	:	6m x 6m
7	Elevation of Mine	:	76 m AMSL to 80 m AMSL
8	Ground Level Elevation	:	76 m AMSL
9	Ultimate Working Depth	:	52 m AMSL
10	Water Table	:	32 m AMSL (Source: JSAC Ground water Prospect Map)
11	Topography of Mine	:	Area represents gently sloping land.
12	Explosive Requirement	:	<42 kg Slurry explosive /day
13	Diesel/Fuel requirement	:	HSD – 352 litre/day (106 KL/year)

Production Details

Year	Production of Stone		Removal of OB
	In cum	In tones	Cum
1st	40860.7	110324.0	18524.9

2nd	36787.7	99326.9	11348.5
3rd	40869.1	110346.7	0.0
4th	40718.4	109939.6	0.0
5th	36607.7	98840.7	0.0
Total	195843.7	528777.9	29873.3

Land Use

Sl. No.	Pattern of Utilization	Present/Existing land use pattern in (Ha.)	Proposed Land use for current plan period (Ha.)	Land used at the conceptual stage i.e. end of mine life in (Ha.)	Area to be converted in the conceptual period.
1	Quarry	0.00	1.11	1.11	Water Body
2	Haul Road	0.00	0.02	0.02	Water Body
3	O.B. Dump	0.00	0.04	0.04	Water Body
4	Garland Drain with setting Tank	0.00	0.12	0.12	--
5	Green belt/ Safety Zone	0.00	0.45	0.45	Green Belt
6	Unutilized	1.74	0.00	0.00	-
Total		1.74	1.74	1.74	

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.45	720	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	350	467	2m X 2 m spacing in two rows both side		
Total		1187			

Note- 1343 trees proposed for plantation, out of which 10% (i.e. 119 trees) plantation will be carried out as per MoEF & CC, Govt. of India Scheme "Ek Ped Ma Ke Naam".

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation.

Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN LAKHS)
PROJECT COST

Sl. No.	Head	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
1.	Government Revenue (Dead Rent & Royalty)	17.00	1.70
2.	Infrastructure	4.00	0.50
3.	Mining Machineries owned by applicant • Wagon Drill -01 • Compressor-01 • Tippers 25 tons-03 • Diesel Pump-01 • D.G. Set-01	88.00	0.00
	a. Mining Machineries on hired basis (Excavator-01, Tippers -03)	0.00	5.04
4.	Lease Agreement (lump-sum)	0.00	1.20
5.	Statutory Clearance & Others	10.0	0.00
6.	Contingency	11.9	0.00
Total		130.9	8.44
Budget for Environment Management		30.61	8.36

ENVIRONMENT MANAGEMENT PLAN (EMP)

Sl. No.	Particulars	Capital Cost in Rs.	Recurring Cost in Rs. per year
1	Water facility for Dust Suppression, watering plants etc. (Rs. 500 per Tanker) 5.261 KLD * 300 = 1578 KL/ Year 1578/4= 395 Tankers	—	1,97,500
2	Plantation 467 X 800 = Rs 3,73,600 (Gabion Plantation along approach road) 720 X 400 = 2,88,000 (Plantation within lease area/Green Belt) (also includes Fertilizer, Pesticides, Maintenance)	6,61,600	66,160
3	Fencing	1,00,000	--

4	Environmental Monitoring (One Day Monitoring) Ambient Air 24 hrs (3 point) -Rs.27,270 Ground Water (2 point) -Rs.12,420 Noise 24 hrs (3 point) -Rs.21,000 Soil (3 point) -Rs.40,920 Total -Rs. 1,01,610 (Per Season) At least two seasons in a Year -Rs. 1,01,610 x 2 = Rs. 2,03,220 Source: Central Pollution Control Board Notification, New Delhi, the 23rd February, 2022	--	2,03,220
5	Special EMP Cost (Water Body)	5,00,000	50,000
6	Public Hearing Budget	18,00,000	3,20,000
Total		30,61,600	8,36,880

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	4 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Summary of Baseline Data:

Monitoring season – December 2024 to February 2025, (Winter Season)

Type	Paramete
AAQ Parameter at 8 locations	PM10 = 49.7 µg/m3 to 73.6 µg/m3 PM2.5 = 21.6 µg/m3 to 43.1 µg/m3 SO2 = 7.09 µg/m3 to 12.9 µg/m3 NOx = 18.3 µg/m3 to 29.5 µg/m3
Noise quality at 8 locations	Daytime 44.1 (AN1) to 45.8 (AN5) dB(A) Night time 32.4 (AN1) to 36 (AN8) dB(A)
Surface water at 3 locations	pH – 7.09 to 7.22 TDS – 285 to 296 mg/l Sulphate – 18.3 to 21.5 mg/l Fluoride – 0.21 mg/l to 0.26 mg/l

Ground water at 6 locations	Turbidity – <1 NTU pH – 6.78 to 7.11 Chloride – 25.3 to 27.6 mg/l Total Hardness – 132 to 145 mg/l TDS – 225 to 236 mg/l
Soil at 5 locations	pH – 6.92 to 7.13 Conductivity – 0.71 µS/cm to 0.82 µS/cm Sulphur – 19.5 mg/Kg to 26.7 mg/Kg Organic Matter – 0.51 to 0.63 %

Public Hearing (Action Plan) –

Sl. No.	Issue Raised	Commitment by Project Proponent (Brief)	Time Frame	Funds to be Spent	
				Capital (in Lakhs)	Recurring (in Lakhs)
1	- Arrangement of drinking water. - Medical facilities should be provided. - Low vibration-controlled blasting should be adopted.	Project proponent assured that drinking water and medical facilities will be provided. Controlled blasting with low vibration will be carried out as per statutory norms.	- Drinking water – Immediate - Medical facilities – As required - Controlled blasting – Regular	5.0 Lakhs 5.0 Lakhs	1. 0.50 Lakhs 2. 1.5 Lakhs
2	- Repair village roads. - Provide Rs. 500 per truck. - Carry out tree plantation.	Proponent assured that roads will be repaired periodically and plantation will be undertaken. Financial assistance will be provided under CSR as per requirement.	- Road repair – Regular - Plantation – Immediate	3.0 Lakhs - Under CSR activities	3.0 Lakhs - Under CSR activities
3	- Assistance during illness. - Financial support. - Support during death ceremonies and marriages.	Proponent assured that employment will be provided as per eligibility and requirement. Vehicle facility for patients will be arranged. Housing scheme matter will be taken up with concerned department.	As and when required	Under CSR Activities	Under CSR Activities

4	Overburden (OB) should not be stored near his agricultural land.	Project proponent assured that OB will be stored only within the designated mining lease area and not outside the lease boundary.	Immediate and throughout mine operation	• Nil	• Nil
5	- Ambulance facility should be provided. - Regular water sprinkling for dust suppression.	Proponent assured that health facilities and ambulance support will be provided when required. Water sprinkling will be carried out regularly.	- Ambulance – As required - Water sprinkling – Regular	Under CSR Activities Project cost	Under CSR Activities Project cost
6	Local villagers should be engaged in transportation activities.	Proponent assured that local villagers will be given preference in transport and other mine-related activities based on eligibility and requirement.	Employment- Immediate.	Under Project Cost	Under Project Cost
7	Financial assistance during social functions, marriages and family difficulties.	Project proponent assured that assistance will be provided under CSR activities as per need.	As and when required	• Under CSR Activities	• Under CSR Activities
8	- No encroachment on private land outside the lease area. - Drinking water problems should be resolved. - Construction of a community club house. - Compensation in case of accidents.	Proponent assured that no encroachment outside the lease area will occur. Deep borewell facilities will be provided at identified locations. A community club house will be constructed and financial assistance will be provided in case of accidents.	- Club house Within 1 year - Compensation As required	• 5 Lakhs	• 0.20 Lakhs

Total	Rs. 18.0 Lakhs	Rs. 3.20 Lakhs
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SE Need based Survey detail (included in CSR)

Zone	Coverage & Survey Details	Key Socio-Economic Observations	Workforce Characteristics	Priority Needs (Focused)	Proposed Budget		Implementation Timeline
					Capital (₹ Lakhs)	Recurring (₹ Lakhs)	
0-2 km	Villages: 5 Households surveyed: 17 Population covered: 96 FGDs Conducted: 3	Balanced gender composition with presence of children and vulnerable groups. Proximity to mine increase's sensitivity to dust, traffic and occupational health issues.	Low workforce participation (~35%); dominance of informal and "other" occupations indicating livelihood instability.	- Preventive healthcare & health check-ups - Local skill development linked to mine & allied activities	3.4	1.0	Short-term & ongoing (Year 1-2)
2-5 km	Villages: 10 Households surveyed: 19 Population covered: 105 FGDs Conducted: 2	Moderate literacy levels with gender disparity; limited access to secondary education and structured training facilities.	Mixed workforce pattern; dependence on agriculture and daily wage labour.	- Education support (secondary level / scholarships) - Agricultural productivity support (inputs, awareness)	3.0	1.5	Medium-term (Year 2-3)
Total (0-5 km)					6.4	2.5	-

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- Solid waste management is important from both aesthetic and environmental points of view and will be managed as per the Solid Waste Management Rules, 2016. - An O.B. (Overburden) dump area of 0.040 ha has been provided within the lease area. - The O.B. dump area will accommodate 29873.3 cum of overburden

	during the working plan period. • After completion of the working plan, the generated O.B. will be backfilled into the stone quarry faces. • Part of the O.B. will be used for haul road and village road maintenance. • The remaining O.B. will be utilized for plantation activities. • No hazardous or other solid waste generation is envisaged from the stone mining activities.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and

 A




	native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection •
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided

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		which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level

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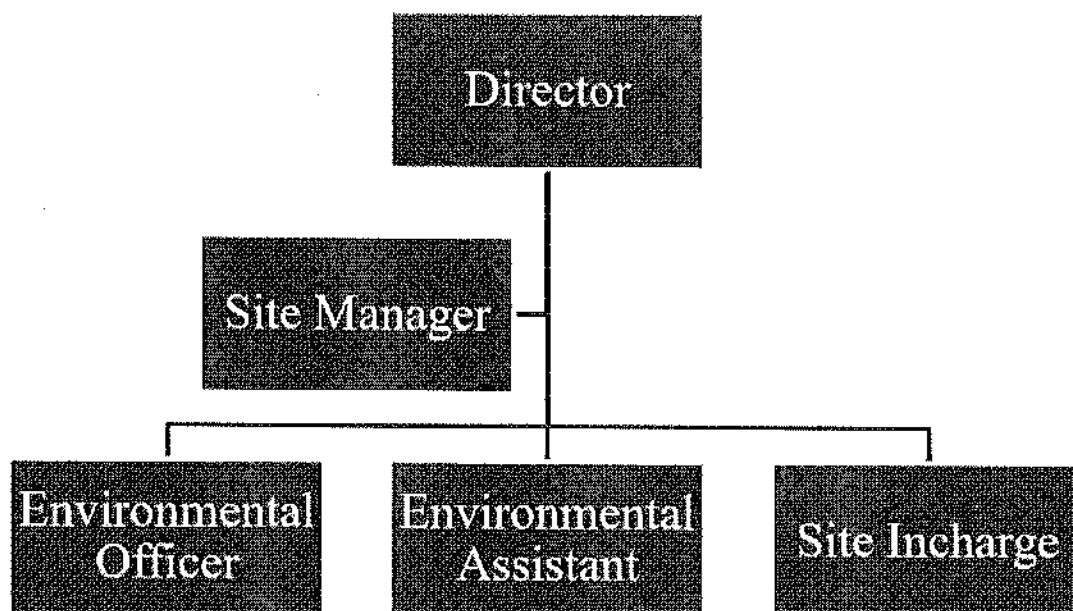
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Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.

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- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Amchua Stone Deposit of Mr. Rashid Akhtar, Village : Amchua, Thana : Shikaripara, Distt. : Dumka, Jharkhand (1.74 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/62/2026/3184, dated : 19.08.2026 is also included as Annexure – I (D) :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- III. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near

mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.

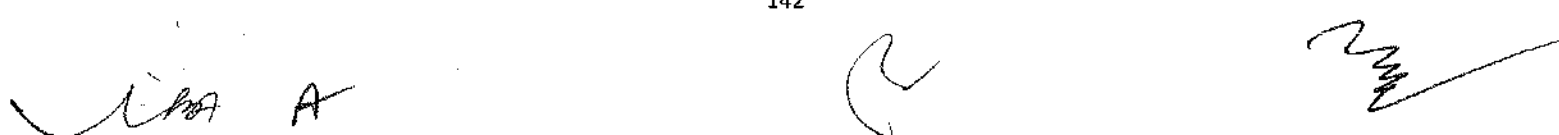
- IV. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- V. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- VI. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- VIII. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

C. Matter related to inspection and monitoring of Remediation Plan and submit the report to SEIAA for release of Bank Guarantee submitted by Project Proponent to Jharkhand State Pollution Control Board (JSPCB).

i. Noamundi Township of M/s Tata Steel Limited, Village : Mahudi, Tehsil : Noamundi, Distt.: West Singhbhum, Jharkhand.

The Project Authorities have submitted evidence of having completed all the requirements of Remediation Plan and Community Resource Augmentation Plan as per EC letter no. EC/SEIAA/2022-23/2770/2023/251, dated 01.09.2023.

Accordingly, a joint site visit with officer from IRO, MoEF&CC, Govt. of India, Ranchi on a mutually convenient date. The Member Secretary, SEAC shall write a letter to IRO, MoEF&CC, Govt. of India, Ranchi in this regard.

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D. Consideration of proposals :

1. Sijua Colliery for expansion in production capacity to 0.60 MTPA Raw Coal of M/s Tata Steel Limited, Village : Sijua and Bhelatand, Tehsil : Putki, Distt. : Dhanbad, Jharkhand (238.66 Ha).

(Proposal no.: SIA/JH/CMIN/ 577522/2026)

Name of the consultant : Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar, Odisa.

This is an expansion project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals (Coal), Category: B1.

Application for Terms of Reference (ToR) for Sijua Colliery (Underground Coal Mine), Capacity 0.60 MTPA within total project area of 238.66 ha.

The proposed project is an expansion of existing Underground Coal Mining Project of Sijua Colliery from to 0.60 MTPA over mine lease area of 238.66 ha located in villages Sijua&Bhelatand, Tehsil Putki, District Dhanbad, Jharkhand by M/s Tata Steel Limited. The Sijua Colliery is owned by M/s Tata Steel Ltd (TSL). Sijua Colliery lies in the Jharia Coalfield, in the Dhanbad district of Jharkhand state. Sijua property was vested in perpetuity to Tata Iron & Steel Co. Ltd. (now TATA STEEL Ltd.) by Sijooah Coal Company in the year 1918, with surfacerights for exploitation of the underground coal reserve from Sijua Coal Company in the year 1918. The block was left out as captive mines of Tata Iron & Steel Co. Ltd. for its existing steel plant in Jamshedpur, Jharkhand, by the Coking Coal Mines Nationalization Act 1971. Sijua Colliery lease area covers 238.66 ha.

1. Sijua Colliery is an existing underground coal mine of Tata Steel Limited since the year 1918.
2. On 27.01.1994, the EIA Notification 1994 was published and it allowed existing mines to operate but expansion of mines required EC. But the meaning of expansion was not defined yet and was later clarified through further notification in 2004.
3. Later in 2004, as per MoEF&CC notification No.J-20012/11/98-IA.II(M) dated 28.10.2004 expansion was defined as:

"III. Expansion in Production (c) If the annual production of any year from 1994-95 onwards exceeds the annual production of 1993-94 or its preceding years (even if approved by IBM), it would constitute expansion."

4. Going by the above definition, highest annual production of Sijua Colliery during 1993-94 or its preceding years was 0.452 MTPA in year 1984-85 (certified production figure from Statistical Wing, Coal Controllers Organization vide mail dated August 22, 2022; 11.39 AM - copy attached) and the mines has never exceeded that production any year after 1993-94. So, Sijua Colliery is not an expansion case and as such no EC was required to be taken for existing coal mine.
5. Further, there has been no change in mining technology and mining method or Expansion, modernization or any change in the product mix or raw material mix after 1993-94.

6. The EIA Notification 2006 and amendments thereof mandated Prior Environment Clearance (EC) for mines expansion or lease renewal or *"as under clause 2 (ii) ... Expansion, modernisation or any change in the product mix or raw material mix in existing projects or activities, listed in the Schedule to this notification, resulting in capacity beyond the threshold limits specified for the concerned sector in the said Schedule..."*; We have neither exceeded base level production of 0.45 MT nor lease renewal was required nor any Expansion, modernization or any change in the product mix or raw material mix for the project was taken up. So, EC was not required for Sijua Colliery under EIA Notification 2006 till date.

Highest annual coal production data of Sijua Colliery is mentioned in following table for all 3 phases (prior to 1994, 1994 to 2006 and beyond 2006):

Phase	Period	Highest (max.) Annual Production Achieved	Reference Year
Pre EIA-Notification	1918-19 to 1993-94	0.452 MT (Base Level)	1984-85 (as per CCO records)
Under EIA Notification 1994	1994-95 to 2005-06	0.343 MT (Not exceeded base level of 0.45 MT)	2002-03 (as per CCO records)
Post EIA Notification 2006	2006-07 to 2021-22 From 2022-23 to 2025-26	0.345 MT (Not exceeded base level of 0.45 MT) 0.25 MT (Not exceeded base level of 0.45 MT)	2010-11 (as per CCO records up to 2021-22). As per CTO approval by JSPCB.

Presently, the mine is being operated at the annual rated capacity of 0.25 MT as per CTO granted by JSPCB vide Consent Ref No. JSPCB/HO/RNC/CTO-13960863/2022/1798, Issued on 25.12.2022 valid till 31.12.2027.

Considering all above facts, Sijua Colliery was not required to obtain the Environmental Clearance (EC) in past under both EIA Notification 1994 and 2006.

Land Details

Ownership Type	Land Type	Area in ha	Percentage
Land owner by Company	a. Mining Infrastructure	4.45	1.86
	b. Colony/Housing	22.24	9.31
	c. Afforested Land	65.55	27.46
Land owned by Private Owner	a. Agriculture	78.6	33.21
	b. Village	16.17	6.77
Govt. Land	a. Forest	-	-
	b. Road	2.93	1.22
	c. River/Drain/Ponds	10.1	4.23
Railway Land	-	38.62	16.18
Total		238.66	100

Plot and Khata No. of the entire Project Area

Khata No.	Plot No.
1	43
1	44
2	126
3	46
3	66
3	67
3	71
3	119
4	68
5	83
6	90
7	64
8	78
8	79
9	153
9	154
10	117
11	368
13	158
14	157
14	162

Khata No.	Plot No.
16	122
17	241
18	123
19	108/1491
21	121
22	866p
23	144
24	55
24	139/1485
25	326
26	124
27	135
29	57
32	108/1492
33	577
33	578
34	588
34	589
35	358
35	455
35	458

Khata No.	Plot No.
35	459
35	460
35	521
35	532
35	551
35	560
35	562
35	984
35	985
35	1082
35	1085
36	113
37	502
37	503
37	504
37	505
37	512
37	513
37	540
37	541
37	542

Khata No.	Plot No.
37	543
37	903
37	1007
37	1036
37	1060
38	152
39	876
39	924
39	928
39	983p
40	469
41	105/1489
42	795
44	910
45	909
45	1001
45	1002
45	1016
45	1017
45	774p
46	454
47	771p
47	772p
49	927
50	103
51	86
52	907
52	993
52	999
52	1000
52	1009
52	1011
52	1014
52	1018
52	1022
53	516
53	517
53	518
55	145
58	1069
60	93
60	95
61	1471
62	118

Khata No.	Plot No.
64	317
65	929
66	867p
67	1061
68	462
70	366
70	429
71	131
72	47
73	718
74	444
75	688
75	689
76	322
77	720
78	601
78	603
78	604
78	607
78	609
78	654
78	655
78	656
78	658
78	659
78	660
79	291
80	474
81	783
81	786
82	721
83	618
83	769
83	780
84	642
84	644
84	645
85	240
85	244
85	417
86	1005
87	620
87	637
87	638

Khata No.	Plot No.
87	639
87	729
87	730
87	738
87	751
87	1042
87	1046
87	1051
87	1063
88	468
89	437
89	438
89	439
89	440
89	441
89	442
89	443
89	794
89	912
89	986
89	1076
89	1087
89	1086p
89	797p
90	205
90	206
90	207
90	209
90	210
90	211
90	226
90	796
90	1119
90	1129p
90	1159p
90	1161p
91	904
91	905
91	911
92	496
92	497
92	506
92	507
92	508

Khata No.	Plot No.
92	1111
94	63
96	137
98	717
99	294
100	268
100	292
101	1475
101	1476
103	930
103	931p
103	982p
106	54
107	1038
108	105/1490
110	481
110	482
110	483
110	484
110	487
110	489
110	555
110	556
111	723
112	1034
113	467
114	625
115	486
115	488
116	681
116	881
117	327
118	863
118	865p
119	770
120	515/1494
122	48
122	49
122	51
125	435
125	533
125	534
125	535
125	536

Khata No.	Plot No.
125	537
125	538
125	539
125	789
125	533/1502
127	203
128	293
132	112
133	39
134	1003
134	1010
134	1013
134	1019
136	926
138	719
140	1029
141	585
141	586
141	587
141	592
141	1131
142	80
143	310
144	906
144	1008
144	1024
144	1026
144	1079
144	1081
144	1113p
144	777p
144	792p
145	91
145	92
145	96
145	97
145	98
147	365
152	565
152	566
152	567
152	568
152	569
152	570

Khata No.	Plot No.
152	571
152	621
152	626
152	627
152	628
152	629
152	630
152	631
152	632
152	633
152	634
152	635
152	636
152	640
152	716
152	731
152	732
152	736
152	737
152	739
152	788
152	992
152	1112p
152	773p
153	1033
154	186
155	193
156	433
157	1012
157	1015
157	1023
158	889
159	890
161	456
161	457
163	1077
166	364
168	390
169	219
169	220
169	251
169	253
169	271
169	401

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Khata No.	Plot No.
169	402
169	405
169	406
169	407
169	409
169	410
169	411
169	414
169	415
169	416
169	254/1480
171	385
172	367
173	557
173	559
173	733
173	734
173	735
173	988
173	989
173	990
173	991
174	445
174	447
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174	606
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174	647
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174	652
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174	662
174	663
174	667

Khata No.	Plot No.
174	668
174	669
174	672
174	678
174	679
174	680
174	682
174	683
174	684
174	685
174	686
174	687
174	747
174	762
174	764
174	765
174	766
174	778
174	787
174	882
174	883
174	884
174	885
174	886
174	887
174	998
174	1059
174	1062
174	1110p
176	324
177	329
178	1027
179	100
180	511
180	514
180	515
181	455/1500
182	321
185	1025
185	1145p
186	227
186	228
186	356
186	357

Khata No.	Plot No.
186	452
186	453
187	312
188	76
189	84
190	85
191	141
191	146
193	318/1511
194	270
195	273
196	1028
198	320
199	50
199	52
200	89
205	923
205	925
206	868
206	869
206	870
206	871
206	872
206	873
206	874
206	875
206	877
206	878
206	879
206	880
207	779
208	105
209	155
210	88
211	159
212	156
213	129
215	128
217	1043
218	130
219	1124
219	1126
220	1080
222	434

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Khata No.	Plot No.
223	262
224	465
225	276
226	331
227	722
228	308
229	598
230	423
231	325
232	1078
233	323
234	523
234	888
234	994
234	996
234	997
234	1020
234	1021
234	1064
234	1068
234	1070
235	307
236	1006
237	490
237	491
237	492
237	493
237	494
237	495
238	132
239	337/1510
240	519
240	520
241	313
242	413
244	574
246	1136
246	1137
246	1138
246	1139
246	1142
246	1147
246	1140p
247	114

Khata No.	Plot No.
248	61
249	111
250	109
251	263
252	136
253	75
254	1037
254	1039
254	1041
255	360
255	428
255	430
255	431
255	432
255	470
255	472
255	473
255	476
255	477
255	478
255	479
255	480
256	56
256	69
256	70
256	115
256	139
257	102
258	82
259	58
259	59
260	671
260	673
260	674
260	675
260	676
260	677
260	744
260	745
260	746
260	748
260	749
260	750
260	752

Khata No.	Plot No.
260	753
260	757
260	761
260	784
260	785
260	790
260	864
260	891
260	892
260	894
260	895
260	896
260	897
260	899
260	900
260	901
260	995
260	1071
260	1072
260	1073
260	1074
260	1075
260	1088
260	1089
260	775
260	791
261	160
261	161
261	163
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Khata No.	Plot No.
261	198
261	199
261	200
261	201
261	202
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261	217
261	218
261	222
261	238
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261	245
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261	248
261	249
261	250
261	255
261	267
261	269
261	272
261	279
261	280
261	281
261	282
261	283
261	286
261	287
261	288
261	289
261	290
261	298
261	388
261	389
261	396
261	403
261	404
261	528
261	545
261	546

Khata No.	Plot No.
261	547
261	548
261	549
261	553
262	499
262	500
262	501
264	754
264	756
264	759
264	760
265	665
271	987
273	330
274	475
276	619
276	622
276	690
276	691
276	692
276	767
276	768
276	781
276	782
277	314
278	62
279	1032
280	318
281	106
281	107
282	72
282	74
282	77
283	412
284	394
286	524
286	529
287	572
287	573
287	575
287	576
287	579
287	580
287	581

Khata No.	Plot No.
287	582
287	583
287	1084
288	525
288	526
288	527
288	525/1496
289	522
291	485
292	913
292	915
292	916
292	917
292	918
292	919
292	920
292	921
292	922
293	436
294	311
292	914
298	73
299	1035
299	1045
299	1048
299	1049
299	911/1504
300	558
301	142
302	81
303	264
304	105/1488
305	296
305	297
306	779/1501
308	755
308	758
308	1065
310	45
310	53
311	138
312	386
314	87
315	140







Khata No.	Plot No.
316	104
317	1040
318	120
318	167
318	221
318	223
318	224
318	229
318	231
318	232
318	233
318	236
318	239
318	254
318	277
318	278
318	285
318	299
318	359
318	361
318	451
318	552
318	561
318	563
318	595
318	710
318	1030
318	1031
318	1054
318	1055
318	1056
318	1057
318	1066
318	1067
318	1141
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318	1146
318	300/1477
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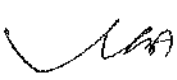
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321	177

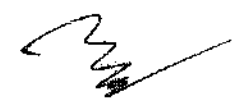
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321	252
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Khata No.	Plot No.
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321	419
321	420
321	421
321	422
321	424
321	426
321	427
321	464
321	466
321	509

Khata No.	Plot No.
321	510
321	530
321	544
321	550
321	590
321	591
321	593
321	594
321	599
321	602
321	605
321	623
321	624
321	641
321	643
321	646
321	653
321	657
321	664
321	666
321	670
321	724
321	727
321	728
321	743
321	763
321	800p
321	1044
321	1047
321	1052
321	1053
321	1058
321	1120
321	1121
321	1122
321	1123
321	1125
321	1127
321	1132
321	1133
321	1134
321	1135
321	1144
321	1128p

Khata No.	Plot No.
321	1155
321	1130p
321	391/1473
321	13/1493
321	252/1497
321	33/1478
321	349/1499
321	42/1486
321	42/1498
321	427/1508
321	43/1487
321	343
321	554
321	564
322	28
322	60
322	94
322	101
322	134
322	164
322	165
322	237
322	242
322	256
322	300
322	301
322	408
322	425
322	463
322	471
322	584
322	596
322	597
322	708
322	725
322	726
322	693
322	694
322	740
322	893
322	902
322	908
322	1118
322	1152



Khata No.	Plot No.
322	167/1483
322	54/1472
323	166
323	168
323	169
323	600
323	350/1512
4	186
7	188
16	193
18	193/940
28	194
29	190
30	173
41	175
41	177
42	156
42	159
42	161
42	192
42	192/941
43	162
43	163
43	164
51	180
65	174
74	189
75	184
80	185
87	170
87	172
87	179
107	191
118	165
123	187
126	153
126	198
126	199
126	200
126	201
126	198/937
129	157
129	158
129	160

Khata No.	Plot No.
129	166
129	168
129	169
129	171
129	176
129	178
129	181
129	183
130	182
130	195
130	193/943
131	154
131	155

Project and Location Details

Sl. No.	Particulars	Details
1	Project Name	Sijua Colliery (0.6 MTPA) – Underground Coal Mine
2	Project Proponent	Tata Steel Limited
3	Project Activity Area	238.66 ha
4	Forest Land	Nil
5	Non-Forest Land	238.66 ha
6	Project Cost	Rs. 168.805 Crores
7	Mine Life	43 Years
8	Proved Reserves	148.04 Million Tonnes (Base Year April-2018)
9	Indicated Reserves	49.77 Million Tonnes (Base Year April-2018)
10	Inferred Reserves	23.38 Million Tonnes (Base Year April-2018)
11	Mineable Reserves	10.68 Million Tonnes (Base Year April-2018)
12	Balance	9.78 Million Tonnes (as on date)
13	Employment Potential	920 (440 Permanent + 480 Contract) Persons
14	Water Requirement	Existing: 8,478 KLD Proposed: 13,000 KLD
15	Water Source	Ground water through Mine seepage
16	Power Requirement	11,025 kVA
17	Average Coal Grade	G-6
18	No. of working days	305 days
Environmental Settings		
1	Nearest Highway	NH-32 at 5 km
2	Nearest Railway Station	Sijua Halt – within mine lease Dhanbad Railway station – 11 km
3	Nearest Airport	Durgapur Airport – 114 km SE
4	Nearest Town/City	Dhanbad – 6.65 km
5	Interstate Boundary	None within 10 km radius
6	Nearest Water Body	Damodar River – 6.01 km, S Khudia Nadi - 4.00 km, W Katri Nadi - 1.1 km, W Jarian Nala – Along lease boundary, SE
7	Reserve / Protected Forests	No forest land inside mining lease area. Nearest forest outside mining lease: Topchanchi, RF - 6.8 km, NE.
8	National Park, Wildlife Sanctuary, Biosphere reserves	No National Park, Wildlife Sanctuary or Biosphere reserve within 10 km radius.
9	CPA/SPA as notified by	No CPA/SPA within 5 km radius.

	CPCB	
Topography		
1	Minimum elevation	179.60 m AMSL in SE
2	Maximum elevation	197.60 m AMSL in NW

Land Use Planning

Pre-mining land use in 'ha'			Type	Use Land (Proposed)	Land Use (End of life)	Land Use (Post-closure)				
						Agricultural land	Plantation	Water body	Public/ community use	Total
Tenancy	Agricultural	Tata Steel has acquired the operating mine in 1918. Before that period this mine was operational under Sijua Coal Company. Thus, pre-mining land use plan is unavailable.	Excavation Area	Nil	Nil	Nil				
	Township		Backfilled Area							
	Grazing		Excavated void							
	Barren		Without plantation							
	Water bodies		Top soil dump							
	Road		External dump							
	Community		Safety zone/ rationalisation area							
	Un-habitated		Road Diversion							
	Village		Diversion below river/nallah/ canal							
Govt Non-forest	Agricultural		Road & Infrastructure Area	26.24	26.24	-	26.24	-	-	26.24

Pre-mining land use in 'ha'	Type	Land Use (Proposed)	Land Use (End of life)	Land Use (Post-closure)				
				Agricultural	Plantation	Water body	Public/ community use	Total
Township	Garland drains	Nil	Nil	Nil				
Grazing/Other	Embankment							
Road	Green belt							
Waterbody	Water reservoir near pit/water body							
Other	UG entry	0.45	0.45	-	0.45	-	-	0.45
Forest	Pit head power plant	Nil	Nil	Nil				
	Resettlement							
	Undisturbed / Mining right for UG	211.97	211.97	78.6	65.55	10.1	57.72	211.57
Free hold	Others	Nil	Nil	-	-	-	-	Nil
Total		238.66	238.66	78.6	92.24	10.1	57.72	238.66

Production Details in MT/year - Base year 2018-19 as per approved mine plan

Year	Total
Y-1	0.25
Y-2	0.31
Y-3	0.31
Y-4	0.31

Year	Total
Y-5	0.31
Y-6	0.31
Y-7	0.31
Y-8	0.32

Year	Total
Y-9	0.32
Y-10	0.34
Y-11	0.34
Y-12	0.36
Y-13	0.40
Y-14	0.60
Y-15	0.60
Y-16	0.40
Y-17	0.31
Y-18	0.30
Y-19	0.30
Y-20	0.30
Y-21	0.25
Y-22	0.25
Y-23	0.25
Y-24	0.20
Y-25	0.20
Y-26	0.18
Y-27	0.17
Y-28	0.17
Y-29	0.16
Y-30	0.15
Y-31	0.15
Y-32	0.14
Y-33	0.13
Y-34	0.13
Y-35	0.13
Y-36	0.13
Y-37	0.13
Y-38	0.13
Y-39	0.13
Y-40	0.13
Y-41	0.13
Y-42	0.13
Y-43	0.12

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Equipment Details

Machinery	Specification	Motor power, kW	No. in use	Proposed (Nos.)
Winders				
Winder (2pit,8 pits,12 pits and 15 pits)	735 rpm, 735 rpm,735 rpm, 735 rpm	55 kW, 130 kW, 130 kW, 130 kW	4	4
In scam Transport				
Direct Haulage System (Material Transportation)	90 kW	90 kW	3	4
	65 kW	60 kW	7	8
End Less Haulage System	37.5 kW	37.5 kW	1	1
Conveyor	900MM	30 kW	18	20
Face Equipment				
Drill machine with panel	Drill dia. 38 mm Voltage 125V	1.1kW	12	20
Face pump (Roto)	GPM:100	7.5 kW	18	22
Auxiliary fan	300m3/min	15kW	12	20
	600m3/min	45kW	2	2
SDL	Bucket Capacity 1.5M3	55kW	9	20
Road Header/CM		160kW	0	1
Chain Conveyor	60TPH	2X13kW	15	26
Other Major Equipment				
HT Pump	Type III	300kW	20	22
MT Pump	Type I	75kW	19	19
Centralized Compressor	900CFM	135kW	2	2

Water Balance - Existing

Status of mine water	Dry Period	KLD	Monsoon Period	KLD
	(Gallons per day)		(Gallons per day)	
Water Use				
Horticulture	3,07,496	1,164	3,07,496	1,164
Water Treatment Plant	1,23,104	466	1,23,104	466
Stowing (Recirculated)	3,50,556	1,327	3,50,556	1,327
Surface Reservoir	45,966	174	45,966	174

(Dust suppression at surface and UG)				
Irrigation	14,12,528	5,347	14,12,528	5,347
Pumped out mine water (Total)	22,39,650	8,478	22,39,650	8,478

Coordinates Range

Latitudes:

23°46'11.576" N to 23°47'13.838" N

Longitudes:

86°19'12.467" E to 86°20'32.258" E

Mining Details

- Bord & pillar method of mining with hydraulic sand stowing is practiced in Sijua Colliery.
- Similar method is to be followed for extraction of lower seams also.
- For thicker seams, pillar extraction will be in two or three lifts. The final extraction of pillars (depillaring) will be done using sand stowing.
- Depillaring has also been done historically in the X seam and no such subsidence to the extent to cause any damage to surface structure has been observed.
- In Sijua colliery, Shaft protection pillars, JC Railway Line that passes East-West on South side of the property and Sijua Railway station are most important features which need to be protected.
- In all the coal seams as per guideline and approval of DGMS and railway authorities, pillars have been left out under the railway line.
- During working of deeper seams similar protective measures will also be taken to protect the railway property. With special approval of DGMS and railways, few galleries are driven across the protective pillars to make access to the other side of the property which is now adjacent to Bhelatand Amalgamated colliery.
- For protection of villages, roads, DVC line and company facilities, hydraulic stowing is practiced in Sijua colliery.
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Baseline data collection

1st March 2025 to 31st May 2025 (Pre-Monsoon) period

AAQ Parameters at 9 locations	PM10: 55.2 to 85.5 µg/m ³ PM2.5: 23.8 to 47.8 µg/m ³ SO ₂ : 14.6 to 26.5 µg/m ³ NO _x : 22.8 to 38.9 µg/m ³ CO: 0.35 to 0.96 mg/m ³
Groundwater quality at 8 locations	pH – 7.1 to 7.9 Alkalinity – 234 to 268 mg/L Chloride – 80 to 128.5 mg/L Total Hardness – 245 to 275 mg/L TDS – 382 to 430 mg/L
Surface water quality at 12 locations	Color – 8 to 22 Hazen pH – 6.8 to 7.9 DO – 4.1 to 5.0 mg/L BOD – 3.8 to 24 mg/L COD – 30.5 to 80 mg/L
Noise levels at 8 locations	44.5 to 52.2 dB(A) for daytime and 35.4 to 44.5 dB(A) for night time
Soil quality at 8 locations	pH – 4.90 to 7.9 Porosity – 46.4 to 52.4% Available N – 138 to 188 mg/kg Phosphorous as P – 14.5 to 20.4 mg/kg Available K – 120 to 146 mg/kg Electrical Conductivity – 0.49 to 0.85 µs/cm

STATUTORY CLEARANCES

1	Land Document	:	The Sijua Colliery is owned by M/s Tata Steel Ltd (TSL). Sijua Colliery lies in the Jharia Coalfield, in the Dhanbad district of Jharkhand state. Sijua property was vested in perpetuity to Tata
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			Iron & Steel Co. Ltd. (now TATA STEEL Ltd.) by Sijooah Coal Company in the year 1918, with surface rights for exploitation of the underground coal reserve from Sijua Coal Company in the year 1918. The block was left out as captive mines of Tata Iron & Steel Co. Ltd. for its existing steel plant in Jamshedpur, Jharkhand, by the Coking Coal Mines Nationalization Act 1971.
2	CO	:	The CO, Putki (Dhanbad) vide letter no. 446, dated 17.04.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyani & Register II.
3	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 1547, dated 11.08.2026 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
4	DFO Territorial	:	Divisional Forest Officer, Dhanbad Forest Division vide letter no. 1835, dated 30.07.2026 certified that the distance of reserved / protected forest is 2500 meters approx. from proposed project site.
5	Mine Plan Approval	:	Mining Plan along with Progressive Mine Closure Plan (PMCP) for Sijua Colliery has been approved by Under Secretary, Ministry of Coal, Govt. of India vide letter no. 13016/1/2014-PCA, dated 12.03.2019.
6	Consent to Operate (CTO)	:	CTO issued by JSPCB vide Ref. No. JSPCB/HO/RNC/CTO-13960863/2022/1798, dated 25.12.2022 valid up to 31.12.2027.
7	CGWA	:	No Objection Certificate (NOC) for withdrawal of water has been obtained from CGWA vide No. CGWA/NOC/MIN/REN/2024 /9654, dated 18.06.2024 valid up to 20.10.2025.
8	Production figure	:	Certified Production Figures by Coal Controller Organisation vide email dated 22.08.2022.

Based on the information contained in the documents submitted and the presentation made before the State Level Expert Appraisal Committee (SEAC) during its meetings held during 23, 24, 25, 26 & 27.08.2026, the Committee recommends for issuing of ToR to SEIAA for undertaking detailed EIA / EMP study as mentioned in Annexure - II alongwith following specific condition :-

- In compliance of OM no. F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.

- II. Study to be carried out regarding the stowing material used to ensure that it meets all the safety norms of DGMS.

2. Proposed for 0.5 MTPA Electrical Steel Complex of M/s Tata Steel Limited, Village : Dugdha, Gamharia, Distt. : Saraikela-Kharsawan, Jharkhand.

(Proposal no.: SIA/JH/IND1/521365/2026)

Name of the consultant : M.N. Dastur & Company (P) Ltd., Kolkata, W.B.

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 3(a) Metallurgical Industries (ferrous and non ferrous), Category: B1.

Application for Terms of Reference (ToR) as per EIA Notification, 2006.

S. No	Parameters	Description
1	Identification of project	Project falls under Metallurgical Industries (Secondary metallurgical processing), Item 3(a) of the schedule of EIA notification of 14 Sept 2006 issued by MOEF&CC (Category – B1)
2	Project Proponent	M/s Tata Steel Limited
3	Brief description of nature of the project	0.5 MTPA Electrical Steel Complex
4	Salient Features of the Project	
4.1	Proposed production capacity	0.5 MTPA Electrical Steel Complex: • 0.4 MTPA Cold Rolled Non-Grain Oriented (CRNO) • 0.1 MTPA Cold Rolled Grain Oriented (CRGO)
4.2	Existing Capacity	NA (It is a new project)
4.3	Capacity after proposed expansion	
4.4	Total Plot Area	46.2 Ha
	Khata no.	1, 2, 3, 10, 15, 20, 29, 32, 33, 37, 39, 51, 54, 56, 58, 61, 65, 66, 68, 71, 73, 77, 79, 84, 86, 87, 93, 98, 100, 101, 102, 107, 109, 110, 111, 122, 127, 128, 133, 143, 149, 157, 158, 159, 163, 166, 168, 173, 176, 178, 183, 189, 190, 200, 201, 207, 213, 216, 109/1, 109A, 10A and 98A.
	Plot No.	15, 16, 77, 78, 79, 81, 82, 84, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114,

S. No	Parameters	Description
		115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 160, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 218, 219, 220, 222, 223, 224, 225, 226, 227, 228, 229, 231, 232, 233, 234, 235, 236, 237, 280, 281, 282, 284, 285, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 144(P), 146(P), 147(P), 159(P), 341/1592 and 82/1584.
4.5	Location	Village: Dugdha & Jhurkuli, Dist: Saraikela Kharsawan, Jharkhand
4.6	Geo-Coordinate	Latitude-22°48'28" N to 22°48'57" N Longitude-86°4'22"E to 86°5'2"E
4.7	Water requirement	Net makeup water requirement for the proposed project will be approx. 202m ³ /h.
4.8	Source of water	Subarnarekha River
4.9	Wastewater	The total wastewater generation is estimated as 240 m ³ /h, including 20 m ³ /hr of domestic wastewater generated from the plant. The wastewaters will be managed through Wastewater treatment plant with RO (process wastewater) and Sewage treatment plant (domestic wastewater), to ensure Zero Effluent Discharge (ZED).
4.10	Manpower	Operation Phase: 620 (Direct) & 1800 (Indirect) Construction Phase: 8000 (Peak contractual workforce)
4.11	Electricity/Power requirement	The power requirement for the proposed project is estimated as 82MW and the same will be sourced from TSUISL.
4.12	Alternative site	Not applicable as the proposed project is planned on the existing site which was acquired by Tata Sponge Iron Limited (TSIL) from M/s UM Cables Limited under the SARFAESI Act. TSIL subsequently underwent

S. No	Parameters	Description
		corporate restructuring/renaming to become Tata Steel Long Products Limited (TSLP), which was subsequently amalgamated into Tata Steel Limited (TSL).
4.13	Land form, Land use and land ownership	Private land, under possession and ownership of TSL
4.14	Project Cost	Rs 9,704 Crores

Details of proposed units with their capacity is as follows:

Sl. No.	Plant Unit	Capacity
1.	Annealing and Pickling Line (APL)	0.541 MTPA
2.	Cold Rolling Mill for CRNO & CRGO – 4/18-High Reversing	0.588 MTPA
3.	Annealing and Coating Line (ACL) for CRNO	0.468 MTPA
4.	De-Carburising and Coating line (DCL) for CRGO	0.110 MTPA
5.	Multi Stack Batch Annealing furnace (MBAF) for CRGO	0.110 MTPA
6.	Flattening and Coating Line (FCL) for CRGO	0.100 MTPA
7.	Recoiling and Inspection Lines (RCL)	0.450 MTPA
8.	Slitting Line	0.12 MTPA
9.	Cut-to-length Line (CTL)	0.080 MTPA
10.	Coil Packaging Lines (CPL)	20 Coils/hr
11.	Major auxiliary units:	
	1. Acid regeneration plant (ARP)	2,800 l/h
	2. Silicon reduction plant (SRP)	12,000 l/h

Details of the proposed products to be generated are as follows:

Sl. No.	Products	Unit	Proposed
1	Cold Rolled Non-Grain Oriented (CRNO) electrical steel	MTPA	0.4
2	Cold Rolled Grain Oriented (CRGO) electrical steel	MTPA	0.1
	Total Electrical steel:	MTPA	0.5

The other detail of the project is as follows:

Raw Materials Requirements

Name of Raw Material	Quantity	Source	Mode of Transport
HR coils	0.577 MTPA	Tata Steel Ltd. & other sources	Road / Rail

Other Chemical Requirements

Chemicals	Requirement	Source	Mode of Transport
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Hydrogen & Nitrogen	Hydrogen (2,420 Nm ³ /hr) & Nitrogen (21,046 Nm ³ /hr)	In house generation	-
1. HCl 2. H ₂ SO ₄ 3. Varnish 4. NaOH 5. MgO 6. Rolling Oil	1. 127 Tonne/Annum 2. 265 KL/Annum 3. 835 KL/Annum 4. 1,500 KL/Annum 5. 735 Tonne/Annum 6. 2000 KL/Annum	Local & Domestic Market within 300 km	Road

This is an indicative source of material while materials can be sourced from open market as per availability.

Makeup Water Requirement for the Plant& Wastewater generation

Unit	Purpose	Recirculating water (m ³ /h)	Net Makeup water (m ³ /h)	Total makeup water requirement (m ³ /h)	Wastewater generation (m ³ /h)
		(a)	(b)	(c) = (a)+(b)	
Plant Operations	Process, Cooling	203	180	383	220
Drinking & Sanitation	Domestic	0	22	22	20
Total		203	202	405	240

Power requirement for the Plant

Unit	Power requirement(MW)
CRM 1,2,3	22.87
APL	6.87
DCL	7.09
FCL	2.65
ACL 1 & 2	39.48
MBAF	5.02
RCL 1,2,3	4.23
Slitter 1,2	1.62
CPL 1,2	0.06
CTL 1,2	1.24
Services & utilities	4.07
Total	95.2
Total for plants with 3% losses &1.2 diversity	82
Total Power required: 82 MW	

Details of Solid waste and their end use

Unit	Type of waste	Description of Waste	Quantity (Annual generation)	End Use
ARP	Non-hazardous	Iron Oxide (byproduct of ARP)	2,740 T	Co-processed / recycled / sold
APL	Non-hazardous	Scrap	36,070 T	Co-processed / recycled / sold
CRM	Non-hazardous	Scrap	22,750 T	Co-processed / recycled / sold
ACL	Non-hazardous	Scrap	7,890 T	Co-processed / recycled / sold
DCL	Non-hazardous	Scrap	250 T	Co-processed / recycled / sold
FCL	Non-hazardous	Scrap	9,900 T	Co-processed / recycled / sold
RCL	Non-hazardous	Scrap	2,500 T	Co-processed / recycled / sold
Slitting & CTL	Non-hazardous	Scrap	3,050 T	Co-processed / recycled / sold
Various plant units	Hazardous	Waste oil & grease	40 T	Co-processed / recycled / disposal internally or Externally (to authorized party)
CRM	Hazardous	Sludge	800 T	Co-processed / recycled / disposal internally or Externally (to authorized party)
RO with MEE	Hazardous	MEE Salt	3,000 T	Co-processed / recycled / disposal internally or Externally (to authorized party)
APL	Hazardous	Waste pickle liquor	20,160 KL	Co-processed / recycled / disposal internally or Externally (to authorized party)
FCL	Hazardous	MgO sludge	590 T	Co-processed / disposal internally or Externally (to authorized party)
SRP	Hazardous	Solids (SiO ₂)	325 T	Co-processed / recycled / disposal internally or Externally (to authorized party)

Baseline data has been generated from March 2024 to May 2024. Details of baseline monitoring are as follows:

MICRO METEOROLOGY

Site Specific Micro-Meteorological Data

Avg. Wind Speed (m/sec)	Predominant Wind Direction	Avg. Temp. [C]	Avg. Relative Humidity [%]	Total Rainfall (mm)
1.22	W, ESE	31.4	54.4	71.4

AAQ Monitoring Locations

Station Code	Location Name	Latitude	Longitude
A1	Sitarampur Village	22° 50'00.02"	86°03'57.47"
A2	Uparbera Village	22° 49'31.12"	86° 04'53.09"
A3	Chota Hariharpur Village	22° 49'39.49"	86° 03'11.61"
A4	Chota Gamharia Village, New Panchayat Bhawan	22° 48'57.18"	86° 05'40.65"
A5	Ramjibonpur (Barkatand)	22° 48'24.79"	86° 03'02.58"
A6	Pragati Nagar (Gamhariya)	22° 48'05.20"	86° 06'01.16"
A7	Udaipur Village	22° 46'20.62"	86° 05'33.97"
A8	Gohnadih Village	22° 49'04.96"	86° 04'04.61"

Ambient Air Quality in Study Area

Station Code	Location	Parameter	Max	Min	Avg.	P98
A1	Sitarampur Village	PM ₁₀	141.8	64.5	122.2	141.7
		PM _{2.5}	81.5	32.8	61.2	77.4
		SO ₂	26.5	4.8	15.6	24.2
		NO ₂	42.5	15	31.3	41.4
		C ₆ H ₆	1.3	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	32.5	<10	-	-
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	0.3	<0.02	-	-
		B(a)P	0.6	<0.36	-	-
A2	Uparbera Village	CO	0.5	0.2	0.3	0.5
		PM ₁₀	132.6	58.2	106.2	132.1
		PM _{2.5}	68.2	26.5	53.7	67.7
		SO ₂	21.8	<4.0	-	-
		NO ₂	38.2	10	26.8	38.2
		C ₆ H ₆	1.3	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	32.5	<10	-	-
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	<0.02	<0.02	-	-

Station Code	Location	Parameter	Max	Min	Avg.	P98
		B(a)P	0.5	<0.36	-	-
		CO	0.5	0.2	0.3	0.5
A3	Chota Hariharpur Village	PM ₁₀	89.5	41.2	69.2	85.2
		PM _{2.5}	53.6	21.5	34.9	50.2
		SO ₂	14.2	4.8	8.8	13.4
		NO ₂	30	10	24	30.0
		C ₆ H ₆	0.9	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	23.5	<10	17.7	23.2
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	<0.02	<0.02	-	-
		B(a)P	0.5	<0.36	0.4	0.4
		CO	0.4	<0.1	0.3	0.4
A4	Chota Gamharia Village (New Panchayat Bhawan)	PM ₁₀	136.2	72.5	115.4	134.6
		PM _{2.5}	68.3	38.2	58.8	68.2
		SO ₂	19.2	6.5	12.5	18.9
		NO ₂	38.2	19.2	26.5	37.3
		C ₆ H ₆	1.2	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	30	<10	-	-
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	<0.02	<0.02	-	-
		B(a)P	0.5	<0.36	-	-
		CO	0.5	0.2	0.3	0.5
A5	Ramjibonpur (Barkatanr)	PM ₁₀	86.5	51.2	70.1	85.9
		PM _{2.5}	47.2	20.8	35.5	47.0
		SO ₂	9.5	4.8	6.7	9.4
		NO ₂	28.5	12.5	21.2	28.5
		C ₆ H ₆	<0.74	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	<10	<10	-	-
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	<0.02	<0.02	-	-
		B(a)P	<0.36	<0.36	-	-
		CO	0.4	<0.1	-	-
A6	Pragati Nagar (Gamhariya)	PM ₁₀	148.2	65.2	113.5	145.3
		PM _{2.5}	73.6	31.5	57.3	73.4
		SO ₂	23.5	5.2	12.9	21.2
		NO ₂	42.5	12.5	27.6	41.0
		C ₆ H ₆	1.12	<0.74	0.8	1.11
		NH ₃	<4.18	<4.18	-	-
		O ₃	26.5	<10	18	25.8
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-

Station Code	Location	Parameter	Max	Min	Avg.	P98
		Ni	<0.02	<0.02	-	-
		B(a)P	0.5	0.4	0.4	0.5
		CO	0.5	0.2	0.3	0.5
A7	Udaipur Village	PM ₁₀	81.6	43.5	66.4	79.1
		PM _{2.5}	42.9	20.8	32.1	40.4
		SO ₂	8.5	<4.0	-	-
		NO ₂	26.5	10	17.5	25.8
		C ₆ H ₆	<0.74	<0.74	-	-
		NH ₃	<4.18	<4.18	-	-
		O ₃	20	<10	-	-
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	<0.02	<0.02	-	-
		B(a)P	<0.36	<0.36	-	-
		CO	0.2	<0.1	-	-
A8	Gohnadih Village	PM ₁₀	141.2	69.20	108.0	139
		PM _{2.5}	72.5	39.20	53.4	70.5
		SO ₂	21.5	6.80	12.3	20.0
		NO ₂	41.80	16.50	30.1	41.7
		C ₆ H ₆	1.38	<0.74	1.05	1.35
		NH ₃	<4.18	<4.18	-	-
		O ₃	28.5	<10	21.1	28.5
		Lead	<0.01	<0.01	-	-
		As	<0.01	<0.01	-	-
		Ni	0.20	<0.02	0.05	0.19
		B(a)P	0.5	0.4	0.4	0.5
		CO	0.6	0.2	0.4	0.6

GROUND WATER QUALITY

Ground Water Quality Monitoring Locations

Station Code	Location Name	Latitude	Longitude
GW1	Sitarampur - Tubewell	22°49'59.80"N	86°03'59.16"E
GW2	Uparbera	22°49'29.91"N	86°04'48.37"E
GW3	Chota Hariharpur Village	22°49'39.33"N	86°03'10.01"E
GW4	Chota Gamharia, New Panchayat Bhawan	22°48'56.89"N	86°05'41.40"E
GW5	Ramjibonpur (Barkatanr)	22°48'24.79"N	86°03'02.58"E
GW6	Pragati Nagar (Gamhariya)	22°48'5.22"N	86°06'1.28"E
GW7	Udaipur Village	22°46'13.74"N	86°05'27.73"E
GW8	Gohnadih	22°49'05.70"N	86°04'04.29"E

Ground Water Quality in Study area

Sl. No.	Parameters	GW1	GW2	GW3	GW4	IS 10500:2012
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Sl. No.	Parameters	GW1	GW2	GW3	GW4	IS 10500:2012
1	Odour (TON)	Odourless	Odourless	Odourless	Odourless	Unobjectionable
2	Colour (Hazen)	1	1	1	1	1
3	Taste	Acceptable	Acceptable	Acceptable	Acceptable	Agreeable
4	Temperature (°C)	24.17	24.67	25.17	25.5	-
5	Total Suspended Solid (mg./l)	<10.0	<10.0	12	<10.0	-
6	Total Dissolved Solid (mg/l)	1039.33	648.33	444	615.67	500 (max.)
7	Electrical Conductivity (µs/cm)	1622.70	1010.27	691.33	962.53	-
8	Turbidity (NTU)	<1.0	<1.0	1.06	1.14	1
9	pH	7.09	7.15	7.06	6.76	6.5-8.5
10	Total Hardness (mg/l)	307.93	162.37	115.19	145.57	200 (max.)
11	Dissolved Oxygen (mg/l)	2.57	2.6	2.57	2.87	-
12	BOD at 27°C for 3 days (mg/l)	<2.0	<2.0	<2.0	<2.0	-
13	COD (mg/l)	<5.0	<5.0	<5.0	<5.0	-
14	Carbonate (mg/l)	<0.6	<0.6	<0.6	<0.6	-
15	Alkalinity (mg/l)	295.95	231.63	121.82	203.52	200 (max.)
16	Bi Carbonate (mg/l)	361.06	282.59	148.62	248.29	-
17	Phenol (mg/l)	<0.01	<0.01	<0.01	<0.01	0.001 (max.)
18	Nitrate + Nitrite (mg/l)	9.91	6.49	8.92	8.74	45 (max.)
19	Chloride (mg/l)	173.68	106.36	89.75	87.83	250 (max.)
20	Fluoride (mg/l)	0.30	0.25	0.59	0.13	1.0 (max.)
21	Sulphate (mg/l)	122.33	47.33	43.33	75.47	200 (max.)
22	Total Nitrogen (mg/l)	4.47	4.08	4.52	4.33	-
23	Residual Chlorine (mg/l)	<0.01	<0.01	<0.01	<0.01	0.2 (max.)
24	Ortho-Phosphate (mg/l)	<0.1	<0.1	<0.1	<0.1	-
25	Calcium (mg/l)	76.27	42.34	24.88	40.1	75 (max.)
26	Magnesium (mg/l)	28.23	13.62	12.75	10.93	30 (max.)
27	Potassium (mg/l)	3.27	1.89	2.02	1.83	-
28	Sodium (mg/l)	43.68	27.78	27.18	35.23	-
29	Manganese (mg/l)	<0.03	<0.03	0.07	0.06	0.1 (max.)
30	Boron (mg/l)	<0.1	<0.1	<0.1	<0.1	0.5 (max.)
31	Lead (mg/l)	<0.005	<0.005	<0.005	<0.005	0.01 (max.)
32	Arsenic (mg/l)	<0.01	<0.01	<0.01	<0.01	0.01 (max.)
33	Zinc (mg/l)	0.04	0.04	0.11	0.06	5.0 (max.)
34	Iron (mg/L)	0.39	0.38	0.58	0.43	0.3 (max.)
35	Copper (mg/l)	<0.04	<0.04	<0.04	<0.04	0.05 (max.)
36	Chromium (VI) (mg/l)	<0.1	<0.1	<0.1	<0.1	0.05 (max.)
37	Nickel (mg/l)	<0.02	<0.02	<0.02	<0.02	0.02 (max.)
38	Mercury (mg/l)	<0.001	<0.001	<0.001	<0.001	0.001 (max.)
39	Cadmium (mg/l)	<0.002	<0.002	<0.002	<0.002	0.003 (max.)
40	Cyanide (mg/l)	<0.01	<0.01	<0.01	<0.01	0.05 (max.)
41	Aluminium (mg/l)	0.08	0.05	0.06	0.10	0.03 (max.)

Sl. No.	Parameters	GW1	GW2	GW3	GW4	IS 10500:2012
42	Total Coliform (CFU/100 ml)	<1	<1	<1	<1	Nil
43	Fecal Coliform (CFU/100 ml)	<1	<1	<1	<1	Nil

Ground Water Quality in Study area...cont.

Sl. No.	Parameters	GW5	GW6	GW7	GW8	IS 10500:2012
1	Odour (TON)	Odourless	Odourless	Odourless	Odourless	Unobjectionable
2	Colour (Hazen)	1	1	1	1	1
3	Taste	Acceptable	Acceptable	Acceptable	Acceptable	Agreeable
4	Temperature (°C)	24	25.00	24.33	24.17	-
5	Total Suspended Solid (mg./l)	<10.0	19.47	10.53	<10.0	-
6	Total Dissolved Solid (mg/l)	970.67	866.00	301.77	373.33	500 (max.)
7	Electrical Conductivity (µs/cm)	1522.87	1352.67	470.80	582.30	-
8	Turbidity (NTU)	2.00	7.06	3.48	1.83	1
9	pH	6.77	7.11	6.89	6.85	6.5-8.5
10	Total Hardness (mg/l)	256.09	192.66	69.97	90.40	200 (max.)
11	Dissolved Oxygen (mg/l)	2.93	2.63	2.63	2.60	-
12	BOD at 27°C for 3 days (mg/l)	<2.0	<2.0	<2.0	<2.0	-
13	COD (mg/l)	<5.0	<5.0	<5.0	<5.0	-
14	Carbonate (mg/l)	<0.6	<0.6	<0.6	<0.6	-
15	Alkalinity (mg/l)	291.88	299	97.35	136.62	200 (max.)
16	Bi Carbonate (mg/l)	356.10	364.78	118.77	166.67	-
17	Phenol (mg/l)	<0.01	<0.01	<0.01	<0.01	0.001 (max.)
18	Nitrate + Nitrite (mg/l)	8.01	10.60	8.40	5.01	45 (max.)
19	Chloride (mg/l)	186.71	102.51	54.73	37.37	250 (max.)
20	Fluoride (mg/l)	0.25	0.16	0.55	0.56	1.0 (max.)
21	Sulphate (mg/l)	110.00	69.60	17.93	23.40	200 (max.)
22	Total Nitrogen (mg/l)	4.09	5.08	4.38	3.52	-
23	Residual Chlorine (mg/l)	<0.01	<0.01	<0.01	<0.01	0.2 (max.)
24	Ortho-Phosphate (mg/l)	<0.1	<0.1	<0.1	<0.1	-
25	Calcium (mg/l)	68.80	51.35	16.94	18.19	75 (max.)
26	Magnesium (mg/l)	20.26	15.49	6.65	10.81	30 (max.)
27	Potassium (mg/l)	3.68	1.39	1.29	1.85	-

Sl. No.	Parameters	GW5	GW6	GW7	GW8	IS 10500:2012
28	Sodium (mg/l)	36.59	90.44	24.61	40.93	-
29	Manganese (mg/l)	0.39	0.11	0.11	0.07	0.1 (max.)
30	Boron (mg/l)	<0.1	<0.1	<0.1	<0.1	0.5 (max.)
31	Lead (mg/l)	<0.005	<0.005	<0.005	<0.005	0.01 (max.)
32	Arsenic (mg/l)	<0.01	<0.01	<0.01	<0.01	0.01 (max.)
33	Zinc (mg/l)	0.06	0.04	0.05	0.03	5.0 (max.)
34	Iron (mg/L)	1.04	4.97	1.38	0.35	0.3 (max.)
35	Copper (mg/l)	<0.04	<0.04	<0.04	<0.04	0.05 (max.)
36	Chromium (VI) (mg/l)	<0.1	<0.1	<0.1	<0.1	0.05 (max.)
37	Nickel (mg/l)	<0.02	<0.02	<0.02	<0.02	0.02 (max.)
38	Mercury (mg/l)	<0.001	<0.001	<0.001	<0.001	0.001 (max.)
39	Cadmium (mg/l)	<0.002	<0.002	<0.002	<0.002	0.003 (max.)
40	Cyanide (mg/l)	<0.01	<0.01	<0.01	<0.01	0.05 (max.)
41	Aluminium (mg/l)	0.06	0.18	0.13	0.07	0.03 (max.)
42	Total Coliform (CFU/100 ml)	<1	<1	<1	<1	Nil
43	Fecal Coliform (CFU/100 ml)	<1	<1	<1	<1	Nil

SURFACE WATER QUALITY

Surface Water Quality Monitoring Locations

Station Code	Location Name	Latitude	Longitude
SW1	Subarnarekha near Tirildih Village, Gamhraia	22°50'12.09" N	86°07'47.04" E
SW2	Subarnarekha & Kharkai River Meeting Point Near Domuhani Shive Mandir, Domuhani Ghat	22°50'13.73" N	86°09'36.67" E
SW3	Kharkai River Near NH-118, Near KadmaChoto Ghat, Green Park	22°48'54.33" N	86°08'59.57" E
SW4	Kharkai River Near Shastri Nager, Word No. 3	22°47'46.13" N	86°09'46.41" E
SW5	Kharkai Dudra Dam, Jilinggora/Dudra Village	22°45'28.03" N	86°08'33.88" E
SW6	Kharkai River Near Gangia	22°45'34.26" N	86°04'54.06" E
SW7	Kharkai River Near JaherChamaru/ Sarna Dhorom)	22°46'43.58" N	86°02'17.88" E
SW8	Sitarampur Reservoir Near Sitarampur Village	22°46'41.74" N	86°06'29.49" E

Surface Water Quality in Study area

Sl. No.	Parameters	SW1	SW2	SW3	SW4
1	Odour (T.O.N)	Odourless	Odourless	Odourless	Odourless

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Sl. No.	Parameters	SW1	SW2	SW3	SW4
2	Temperature (OC)	29.37	28.63	28.70	29.13
3	pH	6.86	6.95	6.76	6.73
4	Total Suspended Solid (mg./l)	10.07	11	10.67	10.47
5	Total Dissolved Solid (mg./l)	176	350.00	425.00	388.67
6	Electrical Conductivity	275.8	554.53	671.53	607.17
7	Turbidity	1.45	3.20	2.49	1.85
8	Total Hardness (mg/l)	47.83	83.16	85.74	75.54
9	Dissolved Oxygen (mg/l)	6.27	6.27	6.03	5.97
10	BOD, 3 days at 27°C (mg./l)	3	5.00	5.00	5.67
11	COD (mg./l)	9.43	18.85	18.85	20.37
12	Oil & Grease (mg./l)	<1.0	<1.0	<1.0	<1.0
13	Salinity (ppt.)	0.00	0.00	0.00	0.00
14	Kjeldahl Nitrogen (mg/l)	3.96	3.27	4.76	5.03
15	NH ₃ - N (mg/l)	<0.01	<0.01	<0.01	<0.01
16	Nitrate + Nitrite (mg/l)	2.41	2.61	2.45	2.07
17	Chloride (mg/l)	17.89	68.21	69.24	68.02
18	Fluoride (mg/l)	0.26	0.27	0.45	0.30
19	Sulphates as SO ₄ (mg/l)	9.93	17.93	36.53	36.93
20	Alkalinity	61.77	101.58	137.85	124.27
21	Bi-Carbonate (mg/l)	75.36	123.93	168.18	151.61
22	Total P (mg/l)	0.51	0.44	0.55	0.73
23	Phosphate (mg/l)	0.59	0.51	0.64	0.83
24	Calcium (mg/l)	11.50	19.04	18.78	16.79
25	Magnesium (mg/l)	4.59	8.55	9.33	8.08
26	Potassium (mg/l)	2.35	4.43	5.29	4.17
27	Sodium (mg/l)	12.77	26.81	34.87	30.87
28	Manganese (mg/l)	<0.03	0.09	0.13	0.06
29	Boron (mg/l)	<0.1	<0.1	<0.1	<0.1
30	Lead (mg/l)	<0.005	<0.005	<0.005	<0.005
31	Arsenic (mg/l)	<0.01	<0.01	<0.01	<0.01
32	Zinc (mg/l)	0.02	0.03	0.03	0.02
33	Iron (mg/l)	0.42	0.51	0.59	0.41
34	Chromium (Total) (mg/l)	<0.02	<0.02	<0.02	<0.02
35	Hexavalent Chromium (mg/l)	<0.1	<0.1	<0.1	<0.1
36	Nickel (mg/l)	<0.02	<0.02	<0.02	<0.02
37	Mercury (mg/l)	<0.001	<0.001	<0.001	<0.001
38	Cadmium (mg/l)	<0.002	<0.002	<0.002	<0.002
39	Total Coliform /100 ml.	2.2 x 10 ³	2.5 x 10 ³	2.5 x 10 ³	2.4 x 10 ³
40	Fecal Coliform /100 ml.	1.6 x 10 ²	1.6 x 10 ²	1.8 x 10 ²	1.7 x 10 ²

Surface Water Quality in Study area...cont.

Sl. No.	Parameters	SW5	SW6	SW7	SW8
1	Odour (T.O.N)	Odourless	Odourless	Odourless	Odourless
2	Temperature (OC)	28.20	29.63	30.10	28.00
3	pH	7.23	7.33	7.23	6.76
4	Total Suspended Solid (mg./l)	10.4	<10.0	<10.0	<10.0
5	Total Dissolved Solid (mg./l)	236	230.33	233.00	557.00
6	Electrical Conductivity	364.63	359.57	364.83	872.97
7	Turbidity	2.59	1.28	1.23	1.51
8	Total Hardness (mg/l)	60.32	75.84	76.19	131.98
9	Dissolved Oxygen (mg/l)	6.27	6.30	6.10	6.27
10	BOD, 3 days at 27°C (mg./l)	3.00	<2.0	3.33	3.33
11	COD (mg./l)	9.43	<5.0	12.60	10.97
12	Oil & Grease (mg./l)	<1.0	<1.0	<1.0	<1.0
13	Salinity (ppt.)	0.00	0.00	0.00	0.00
14	Kjeldahl Nitrogen (mg/l)	4.75	4.72	4.96	7.69
15	NH ₃ - N (mg/l)	<0.01	<0.01	<0.01	<0.01
16	Nitrate + Nitrite (mg/l)	2.25	2.17	2.00	3.48
17	Chloride (mg/l)	25.00	20.36	18.80	96.26
18	Fluoride (mg/l)	0.25	0.46	0.27	0.39
19	Sulphates as SO ₄ (mg/l)	12.67	12.53	10.53	69.80
20	Alkalinity	86.80	77.08	78.20	157.08
21	Bi-Carbonate (mg/l)	105.90	94.04	95.40	191.64
22	Total P (mg/l)	0.72	0.62	0.53	0.78
23	Phosphate (mg/l)	0.81	0.72	0.61	0.88
24	Calcium (mg/l)	12.22	14.74	15.60	29.20
25	Magnesium (mg/l)	7.16	9.37	8.94	13.95
26	Potassium (mg/l)	1.86	1.68	1.86	6.21
27	Sodium (mg/l)	14.89	13.96	14.54	33.08
28	Manganese (mg/l)	<0.03	0.03	<0.03	0.05
29	Boron (mg/l)	<0.1	<0.1	<0.1	0.16
30	Lead (mg/l)	<0.005	<0.005	<0.005	<0.005
31	Arsenic (mg/l)	<0.01	<0.01	<0.01	<0.01
32	Zinc (mg/l)	0.02	0.02	0.02	0.02
33	Iron (mg/l)	0.70	0.42	0.53	0.64
34	Chromium (Total) (mg/l)	<0.02	<0.02	<0.02	<0.02
35	Hexavalent Chromium (mg/l)	<0.1	<0.1	<0.1	<0.1
36	Nickel (mg/l)	<0.02	<0.02	<0.02	<0.02
37	Mercury (mg/l)	<0.001	<0.001	<0.001	<0.001
38	Cadmium (mg/l)	<0.002	<0.002	<0.002	<0.002
39	Total Coliform /100 ml.	2.7 x 10 ³	2.5 x 10 ³	2.6 x 10 ³	2.5 x 10 ³
40	Fecal Coliform /100 ml.	1.8 x 10 ²	1.5 x 10 ²	1.8 x 10 ²	1.8 x 10 ²

SOIL QUALITY

Soil Quality Monitoring Locations

Code	Location	Latitude	Longitude
S1	Project site	22°48' 35.45"N	86° 04' 31.25"E
S2	Agricultural Land (Near Rajgaon Village)	22°46' 40.57"N	86° 04' 51.07"E
S3	Agricultural Land (Near Prabatipur Village)	22°44' 34.43"N	86° 08' 49.82"E
S4	Forest Land (Near ABC Dugdha Football Ground & Hundburbera village)	22°48' 02"N	86° 04' 34"E
S5	Forest Land (Near Rapcha Village)	22°51' 18.98"N	86° 04' 42.07"E

Soil Quality in Study area

Key Parameters	S1	S2	S3	S4	S5
Colour	Slightly reddish	Greyish	Slightly reddish	Greyish	Slightly reddish
Soil Texture	Sandy clay loam	Sandy clay loam	Sandy clay loam	Sandy loam	Sandy loam
Sand (%)	65	60	62	70	75
Silt (%)	15	20	20	20	15
Clay (%)	20	20	18	10	10
Electrical conductivity (dS/m)	1.4	1.6	1.8	2.3	2.1
Hydraulic conductivity (cm/sec.)	1.4×10^{-3}	1.9×10^{-3}	2.1×10^{-3}	1.8×10^{-2}	3.8×10^{-2}
Bulk Density (gm/c.c)	1.2	1.6	1.9	1.1	1.4
Moisture (%)	15	26	29	16	23
Porosity (%)	38	42	45	38	40
Infiltration rate (cm/hrs)	1.6	1.9	2.2	1.6	1.9
pH (1:2)	7.26	7.43	7.4	7.12	7.23
Alkanity/Acidity	very slightly basic	very slightly basic	very slightly basic	slightly basic	very slightly basic
Available N ₂ (mg/kg)	850	1150	1210	520	850
Available P ₂ O ₅ (mg/kg)	690	890	1080	410	620

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Key Parameters	S1	S2	S3	S4	S5
Available K ₂ O (mg/kg)	1250	1420	1290	720	910
Chloride (mg/kg)	890	810	865	1150	1050
Sulphate (mg/kg)	790	860	1025	980	1260
Sodium absorption ratio (SAR)	5.39	6.76	6.63	5.42	5.64
Available Organic Carbon (gm/kg)	5.2	7.8	7.2	4.2	5.2
Calcium (mg/kg)	1120	820	1020	1280	1120
Magnesium (mg/kg)	1280	1150	1290	960	850
Iron (mg/kg)	2850	1120	1050	1265	1020
Copper (mg/kg)	6.5	9.2	6.7	11.5	9.2
Lead (mg/kg)	<3.0	<3.0	<3.0	<3.0	<3.0
Chromium (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
Microbial Population (CFU/ gm)	4.1 x 10 ⁴	6.2 x 10 ⁴	7.4 x 10 ⁴	3.8 x 10 ⁴	4.1 x 10 ⁴
Cation Exchange Capacity (meq/100g)	18.9	16.7	18.6	15.9	14.6

NOISE LEVEL MONITORING

Noise Level Monitoring Locations

Station Code	Location	Latitude	Longitude
N1	Proposed Gate No. - 1, Near Gohanadih Village	22°48'57.68" N	86°04'24.14"E
N2	Proposed Gate No. - 2, Near Dugdha Shiv Mandir	22°48'27.09"N	86°04'29.73"E
N3	Near Dugdha Village	22°48'29.60"N	86°04'58.08"E
N4	Sona Chawk	22°48'23.37"N	86°04'26.41"E
N5	Tata Steel, Gamharia, Gate No - 1	22°48'55" N	86°05'2.76"E
N6	F.P.A.I. Hospital	22°48'41.73"N	86°05'30.23"E
N7	Bhojpur Colony	22°49'01.76"N	86°05'41.42"E

N8	Kerala Public School	22°49'12.61" N	86°05'39.88" E
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Noise Levels in the Study area

Station Code	Day time Leq, dB (A)	Night time Leq, dB (A)
N1	69.03	55.22
N2	71.75	56.58
N3	67.29	58.82
N4	66.65	53.81
N5	65.28	57.51
N6	57.2	50.83
N7	60.63	53.19
N8	72.32	49.41

TRAFFIC STUDY

Traffic Study Locations

Station code	Location
T1	Gamaria Bus Stop (4 Lane 2 way divided arterial road, Capacity- 3600 PCU/hr)(4 Lane 2 way divided arterial road, Capacity- 3600 PCU/hr)
T2	Near Jamshedpur IOCL LPG Bottling Plant (2 Lane 2-way undivided sub-arterial road, Capacity- 1200 PCU/hr)

Summary of Classified Volume Count Survey at Gamharia Bus Stop (Normal Day)

Sl. No.	Vehicle Type	Daily Traffic (No.)	Equivalent PCUs factor	Avg. Daily Traffic (PCU)
1	Car and Jeep	3790	1	3790
2	Bus	214	2.2	470.8
3	Truck	5115	3.7	18925.5
4	Two-Wheeler	2784	0.75	2088
Total Traffic		11903		25274.3

V/C Ratio- 0.29, LOS-B

Summary of Classified Volume Count Survey at Gamharia Bus Stop (Holiday)

Sl. No.	Vehicle Type	Daily Traffic (No.)	Equivalent PCUs factor	Avg. Daily Traffic (PCU)
1	Car and Jeep	2480	1	2480
2	Bus	186	2.2	409.2
3	Truck	3591	3.7	13286.7
4	Two-Wheeler	2021	0.75	1515.75
Total Traffic		8278		17691.65

**Summary of Classified Volume Count Survey
Near Jamshedpur IOCL LPG Bottling Plant (Normal Day)**

Sl. No.	Vehicle Type	Daily Traffic (No.)	Equivalent PCUs factor	Avg. Daily Traffic (PCU)
1	Car and Jeep	3006	1	3006
2	Bus	85	2.2	187
3	Truck	2176	3.7	8051.2
4	Two-Wheeler	2674	0.75	2005.5
Total Traffic		7941		13249.7

V/C Ratio- 0.46, LOS-C

Summary of Classified Volume Count Survey

Near Jamshedpur IOCL LPG Bottling Plant (Holiday)

Sl. No.	Vehicle Type	Daily Traffic (No.)	Equivalent PCUs factor	Avg. Daily Traffic (PCU)
1	Car and Jeep	1941	1	1941
2	Bus	80	2.2	176
3	Truck	2317	3.7	8572.90
4	Two-Wheeler	1859	0.75	1394.25
Total Traffic		6197		12084.15

STATUTORY CLEARANCES

1	Land Document	:	Private land, under possession and ownership of Tata Steel Limited.
2	CO	:	The CO, Gamharla (Saraikela-Kharsawan) vide memo no. 786, dated 12.06.2026 and memo no. 936, dated 15.07.2026 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyan & Register II.
3	DFO Wild Life	:	Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 1263, dated 21.07.2026 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
4	DFO Territorial	:	Divisional Forest Officer, Saraikela Forest Division vide letter no. 2065, dated 01.08.2025 certified that the distance of reserved / protected forest is less than 250 meters from proposed project site. The project qualifies as an "existing project" as it was legally established and operational well before the establishment of SEIAA and SEAC on 27 December 2012. Hence, this project is entitled to be evaluated on an "as is where it is basis", as it does not fall within a notified/demarcated forest or an Eco-Sensitive Zone (ESZ), allowing for the lawful exemption from the minimum distance from forest guidelines.

Based on the information contained in the documents submitted and the presentation made before the State Level Expert Appraisal Committee (SEAC) during its meetings held during 23, 24, 25, 26 & 27.08.2026, the Committee recommends for issuing of ToR to SEIAA for undertaking detailed EIA / EMP study as mentioned in Annexure - III alongwith following specific condition :-

- I. In compliance of OM no. F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. Provision shall be made for development of green belt of minimum 33% of the project area.

3. Jitpur Under Ground Coal Mine of 0.6 / 0.7 MTPA (Normative / Peak) of M/s Steel Authority of India Limited – Collieries Division, Village : Noonudih & Jitpur, Block : Jharia, P.S. : Jorapokhar, Distt. : Dhanbad, Jharkhand (163.69 Ha).

(Proposal no. : SIA/JH/CMIN/585796 /2026)

The project was granted EC under violation category vide SEIAA letter no. EC/SEIAA/2022-23/2733/2022/103 dated 07.06.2023 and timeline for execution of Remediation Plan & Natural and Community Resource Augmentation Plan to be implemented within three years from the date of issue of EC i.e. upto 06.06.2026.

The request of the Project Authority and reason provided for extension of the timeline for execution of Remediation Plan & Natural and Community Resource Augmentation Plan by 02 years was considered by SEAC and were satisfied with the reason provided by the PAs.

Hence, the SEAC recommends to SEIAA for extension of the timeline for implementation of Remediation Plan and Natural & Community Resource Augmentation Plan by 02 years i.e. 06.06.2028 with a following specific condition :

- I. Project Authority will provide evidence of substantial progress in implementation of the above within six months from the grant of amended EC.

4. Mogalpara Brick Soil Mining of M/s Nazhar Bricks (Prop. : Md. Najaharul Islam), Village : Mogalpara, Thana : Mogalpara, Thana no. : 55, Distt.: Sahibganj, Jharkhand (2.47 Ha).

(Proposal no.: SIA/JH/MIN /583885 /2026)

Name of the consultant : Rian Enviro Pvt. Ltd., Patna, Bihar

This is a new project which has been taken for appraisal on 25.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity: 1,500Cum Per Annum (6,00,000 Bricks per annum).

Project and Location Details:

S. No	Parameter		Details
1	Project Name	:	Mogalpara Brick Soil Mining by Nazhar Bricks
2	Proprietor	:	Md. Najaharul Islam

3	Lease Address	:	Village- Mogalpara,Thana-Barharwa, Thana No-33/55 District-Sahibganj, Jharkhand.
4	Lease Area	:	Acres: 6.10 Ha: 2.47
5	Cluster Details	:	NA
6	Type of Land	:	Raiyati Land (Non-forest Land)
7	Project Cost	:	41.8 Lakhs
8	EMP Budget	:	Capital: 12.51 Lakhs Recurring: 6.0 Lakhs / year
9	New or Expansion	:	New
10	Mineable Reserves	:	21,200 Cum (as per approved Mine Plan)
11	Mine Life	:	14 Years (Lease Agreement upto 2031)
12	Man power	:	30 persons
13	Water Requirement	:	Total water requirement is about 2.6 including drinking (0.30 KLD), sprinkling (0.19 KLD) and for greenbelt (2.11 KLD).
14	Water Source	:	The drinking water will be available from nearby village by tractor tank manually by labors at the site.
15	Nearest Water Body	:	Gumani River is about 3.26 Km in South direction.
16	Nearest Habitation	:	Mogalpara village is about 0.15 km in South direction. (EMP Submitted)
17	Nearest Rail Station	:	Bonidanga Railway station is approx. 1.6 km in SE direction.
18	Nearest Airport	:	Deoghar Airport is about 119 km in NE Direction
19	Nearest Forest	:	Protected Forest, approx. 7.45 km in NNW. Open Mixed Forest, approx. 7.87 km in NW. Open Mixed Forest, approx. 8.28 km in West.
20	Road & Highways	:	NH-33 Road is 0.12 KM in South direction.
21	Approach road	:	Approach road is 19 m in SW direction.
22	Eco Sensitive Zone (ESZ)	:	Eco Sensitive Zone (ESZ) is 4.5km in NWdirection (Manjurjhuti Village)

CO-ORDINATES

S. No.	Latitude	Longitude	S. No.	Latitude	Longitude
1	24°50'8.09"N	87°47'56.30"E	15	24°49'59.71"N	87°47'58.38"E
2	24°50'8.05"N	87°47'56.95"E	16	24°50'0.08"N	87°47'57.93"E
3	24°50'7.80"N	87°47'57.40"E	17	24°50'4.24"N	87°47'58.97"E
4	24°50'5.88"N	87°47'57.01"E	18	24°50'4.54"N	87°47'57.32 E
5	24°50'5.76"N	87°47'57.62"E	19	24°50'3.46"N	87°47'57.04" E
6	24°50'7.79"N	87°47'58.09" E	20	24°50'3.52"N	87°47'56.19"E
7	24°50'7.93"N	87°47'58.64"E	21	24°50'2.74"N	87°47'55.84" E
8	24°50'7.83"N	87°47'59.57"E	22	24°50'2.90"N	87°47'54.92"E
9	24°50'7.44"N	87°48'0.09" E	23	24°50'4.68"N	87°47'55.51"E

10	24°50'6.94"N	87°48'0.07" E	24	24°50'4.89"N	87°47'55.04"E
11	24°50'6.98"N	87°47'59.47" E	25	24°50'6.21"N	87°47'55.40"E
12	24°50'6.24"N	87°47'59.41"E	26	24°50'6.91"N	87°47'55.71"E
13	24°50'6.16"N	87°48'0.05" E			
14	24°50'1.14"N	87°47'58.94"E			

LAND DETAILS

Village	Khata No	Plot No./Dag No.
Mogalpara	176	84
	51	86
	155	87
	40	88, 90
	217	93
	245	95

STATUTORY CLEARANCES

1	LOI / Lease docs	:	Lease agreement made.
2	CO	:	The CO, Barharwa, Sahibganj vide letter no. 509/Ra., dated 10.06.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatyan & Register II.
3	DMO Cluster	:	DMO, Sahibganj vide memo no. 873/M, dated 22.06.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO –cum- Incharge Wildlife Sanctuary, Udhwa vide letter no. 1137, dated 03.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Udhwa Bird Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Sahibganj Forest Division vide letter no. 1136, dated 03.06.2026 certified that the distance of notified forest is 500 meters from proposed project site.
6	DSR	:	The DMO, Sahibganj has certified vide memo no. 872/M, dated 22.06.2026 that this project is mentioned in approved DSR of Sahibganj District as a potential area (Page no. 177).
7	Gram Sabha	:	Gram Sabha conducted on 02.06.2026.
8	Mine Plan Approval	:	Approved by DMO, Sahibganj vide Letter No. 892/M, dated 25.06.2026.
9	Qualified Person	:	Md. Tauseef Warsi was present in the meeting and affirmed that the mine plan has been prepared by him.

WORKING DETAILS

1	Mining Method	:	Open CastManualMethod
2	Quarry Area	:	6.10Acres / 2.47Ha
			Life of Mine – 14years (Lease agreement: Upto 2031)
3	Waste Generation	:	No mine waste generation
4	Stripping Ratio(t/m ³)	:	00:00
5	Working Days	:	200
6	Benches: size & No	:	1 x 1.5
7	Highest Elevation of lease Area	:	46m AMSL
8	Lowest Elevation of lease Area	:	45m AMSL
9	Ultimate Working Depth	:	2m BGL
10	Water Table	:	15-20m BGL
11	Topography of Mine	:	Uneven land
12	Explosive Requirement	:	--
13	Diesel/Fuel requirement	:	--

PRODUCTION DETAILS

Year	Production of Clay in Cum
1st	1500
2nd	1500
3rd	1500
4th	1500
5th	1500
Total	7500

LAND USE

Sr. No.	Pattern of Utilization	Present/ Existing Land use pattern in (Ha.)	Proposed Land use for plan period (Ha.)	Land used at the conceptual stage i.e. end of mine life in (Ha.)
1	Mining Quarry	0.00	0.35	1.06 Backfilled of top soil to extend possible
2	Safety Zone (2m)/ (Berm Area)	0.00	0.25	0.25
3	Top Soil Dump	0.00	1.16	1.16 ha areaThe brick kiln will be removed,and farming will be carried out at that site.
4	Brick Kiln	0.00		
5	Tem. Labour Shelter & Kacha Bricks making	0.00		
6	Unused Area	2.47	0.71	0.00
	Total	2.47	2.47	2.47

ENVIRONMENT MANAGEMENT Green Belt Development

- In accordance with Office Memorandum No. F.No. IA3-22/3/2024-IA.III (E-241594), dated 24.07.2024, issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), out of the total 705 trees proposed to be planted in the designated green belt area—both within and outside the lease boundary—10% (approximately 70 saplings) shall be earmarked under the national tree plantation campaign "Ek Ped Ma Ke Naam."

Year	Location	Spacing b/w plants	Total No. of Plants	Area Cover in Square Meters	Total Area in Ha.	Species of plants
1 st	Safety Zone/ Berm area	2.0 x 2.0	625	2500	0.25	Along the Rd. fruit bearing trees . Mango, Jackfruit, Guava,
	Approach Road	2.5 x 2.5	80	50m Approach Road 50/2.5=20 x4 row=80 plants	50 mtr	
2 nd	Care & Protection	---	---	---	---	
3 rd	Care & Protection	---	---	---	---	
4 th	Care & Protection	---	---	---	---	
5 th	Care & Protection	---	---	---	---	
Total			705		0.25	

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Environment Management Budget

PROPOSED FOR ENVIRONMENT MANAGEMENT COST			
S.NO	Mitigative measures to protect Environment	Capital Cost (In Lakhs)	Recurring cost (In Lakhs)
01.	Water Sprinkling/Air pollution control (Dust Suppression along haulage road and maintenance cost @200ltr * 1 rs* 200 working days)	0.48	0.40

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02.	Green belt development safety zone and along the road (for each plant including hedges and fences) @ No. of plants 705 x 500 Rs.	3.53	1.2
03.	Water requirement for green belt @2200ltr * 1 rs* 200 working days	-	4.40
04.	Protection of Habitation due mining operation	8.5	-
TOTAL		12.51	6.0

Endangered species of flora, fauna & Schedule-I

Based on the preliminary study conducted during the baseline data generation phase, along with consultations with local residents and relevant authorities, no endangered species of flora or fauna, including those listed under Schedule-I of the Wildlife (Protection) Act, 1972, were observed within the designated 10 km study area.

Environment Monitoring programme

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring	Responsibility
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly	Proponent/Third Party
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly	Proponent/Third Party
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly	Proponent/Third Party
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly	Proponent

Solid Waste Management

- A total of 665.25 cum of topsoil will be generated. The removed topsoil will be safely stored at the NE side corner within the ML area. After completion of mining operations, the stored topsoil will be used for backfilling in the excavated area, followed by grass cultivation / greenbelt development.

Water Quality Management

- Mining is planned to above the ground water table. In case any intersection is likely, mining activities will be stopped 2 m above Ground Water Table (GWT). No mining will be done below GWT.

- The rain water during rainy season will be collected in a pit and shall be use for dust suppression and plantation. Excess water, if any shall be discharged in natural stream after settling of suspended particles in the pit. Pump having required capacity will be installed to lift accumulated rain water from working pit and pumped to the settling tank.
- It shall be ensured that quality of drinking water for the worker is hygienic and good sanitation system shall be made available.

Air Quality Management

- Dust extractor or wet drilling shall be followed to control dust at source of emission during drilling.
- Sharp drill bits will be used for drilling and regrinding will be done periodically to reduce the dust generation.
- All machineries and transport vehicles shall be properly maintained and pollution check will be done once in a year to keep the emissions from machineries and vehicle under control. Records for same to be maintained.
- Water sprinkling will be done on haul road to control emission of dust while transporting minerals and waste. Provision for water spray by tankers on 'kaccha road shall be done.
- Water sprinkling at loading area shall be done
- Use of personal protective equipment like dust mask etc shall be put in practice.
- Ambient air pollution monitoring shall be carried out every six months.

RISK ASSESSMENT

Transportation of brick along the public road may cause accident which may cause injury.

Preventive Measures:

1. Ensure speed limit for the haulage vehicle for 40 KMPH.
2. Regular maintenance of haulage road
3. Appropriate navigational signs informing sensitive area like school and habitation
4. Regular maintenance of the vehicles.

Dust generation

- No drilling involved
- Dust mass would be supplied to workers.
- Regular sprinkling of water on road

Drilling Operations

No drilling is involved in this mining.

Blasting Operations

No drilling is involved in this mining.

Noise Generation

Source of noise pollution in the project would be movement of tippers / tractors transporting sand from mine to stock yard. In general tippers / tractors produce a noise level of 75-90 (A) measured at distance of 3m from the source.

Health Hazards

During digging and handling of soil i.e. loading, transportation and unloading of sand, workmen would be exposed to inhalation of fine dust particles.

Measures

Following mitigation measures would be taken to minimize this impact on health

- Regular water sprinkling on haulage roads
- Tree plantation on both sides of haulage road
- Tippers/Tractors carrying sand would be covered
- Mask would be provided to workmen employed for digging, loading, transportation and unloading activities

Accident at Site

Identifying the hazards that come along with the presence of vehicles at the workplace (e.g. reversing operations, loading) can cause harm if not properly handled. Among some of the factors that may make vehicle accidents more likely are:

- Separate alignment for movement of loaded vehicles coming out of mine site
- Ensure speed restriction of 10 KMPH within mine site for incoming and outgoing tippers
- Regular maintenance and repair of haulage vehicles employed for sand transportation
- No overtaking of transportation vehicles within mine site
- Proper maintenance of haulage roads

Transportation

The usual method of transporting minerals from the working face is by trucks /tippers/dumpers. Large earth moving equipment's are used for loading /transporting large quantity of mineral from a mine. During transportation of minerals in the mining area, utmost care will be taken by the vehicle operator to avoid any accident with any incoming vehicle by keeping sufficient gap between the two vehicles, keep safe distance from the edge of the mine face, avoid any accident to a worker crossing the haul road and shall maintain low speed. The vehicle operator shall not try to overtake another vehicle.

- Mine road shall be made smooth regularly with a road roller.
- Mine road will be cleaned daily to remove fallen rock/stones for smooth transportation.
- Mine road will be made sufficiently wide to keep two-way traffic.
- Mine roads will be designed as per the specifications given under MMR 1961.
- Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust.
- All transportation within the mine lease area should be carried out directly under the supervision and control of management.
- The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management.
- Navigation signs will be provided at each and every turning point up to the main road (wherever required).
- To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
- Only trained drivers will be hired.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.

- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Mogalpara Brick Soil Mining of M/s Nazhar Bricks (Prop. : Md. Najaharul Islam), Village : Mogalpara, Thana : Mogalpara, Thana no. : 55, Distt.: Sahibganj, Jharkhand (2.47 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be

done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

5. **Binderi Bandarkola Stone Deposit of M/s Jai Hanuman Mining (Partner : Shri Amit Kumar Yadav), Village : Binderi Bandarkola, Thana : Borio, Distt. : Sahibganj, Jharkhand (2.833 Ha). (Proposal no.: SIA/JH/MIN/ 568259 /2026)**

The PAs vide email dated 22.08.2026 requested for deferment of the project.

Hence, the proposal will be taken up for consideration next meeting of SEAC.

6. **Pakadiya Stone Deposit of M/s O.P. Stone Works (Partner : Shri Arun Kumar Singh & Others), Village : Pakadiya, Anchal : Mandro, Thana : Mirzachowki, Distt. : Sahibganj, Jharkhand (2.87 Ha).**

(Proposal no.: SIA/JH/MIN/ 570337 /2026)

The PAs vide email dated 22.08.2026 requested for deferment of the project.

Hence, the proposal will be taken up for consideration next meeting of SEAC.

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Day 4 : 26th August, 2026 [Wednesday]

A. Deputy Commissioner, Dhanbad or through authorized representative.

i. Final District Survey Report (DSR) for Minor Minerals other than Sand Mining or River Bed Mining (Earth Work), Distt. Dhanbad.

The final DSR was submitted by Deputy Commissioner, Dhanbad. He was represented by Shri Ritesh Raj Tigga, District Mining Officer, Dhanbad at the SEAC meeting on 26.08.2026.

During the meeting the DMO, Dhanbad presented the DSR before the Committee. The DSR was appraised in light of S.O. no. 3611 (E), dated 25.07.2018 of MoEF&CC, Govt. of India.

The final DSR had been placed in the public domain for 30 days from the 19.08.2025. As per the Sub Divisional Committee no comments / observations were received.

The DSR has been prepared as per the format provided in the above notification. The DSR submitted has been approved by the Sub-Divisional Committee. All the 27 chapters as prescribed in the S.O. no. 3611 (E), dated 25.07.2018 have been incorporated in DSR and duly verified during appraisal process and found to be satisfactory.

Hence, the final DSR for Minor Minerals other than Sand Mining or River Bed Mining (Earth Work) of District Dhanbad is recommended to SEIAA for approval.

B. Deputy Commissioner, Pakur or through authorized representative.

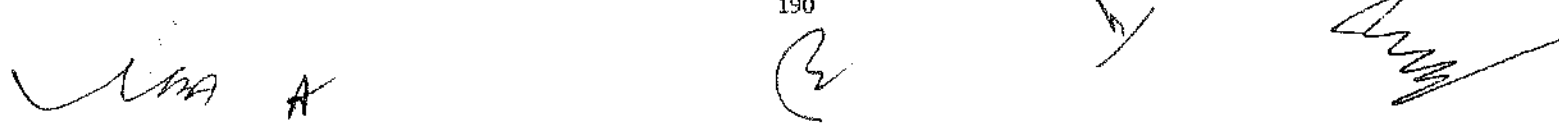
i. Updated District Survey Report (DSR) for Minor Minerals other than Sand Mining or River Bed Mining (Stone), Distt. Pakur.

The updated DSR was submitted by Deputy Commissioner, Pakur. He was represented by Shri Rajesh Kumar, District Mining Officer, Pakur at the SEAC meeting on 26.08.2026.

During the meeting the DMO, Pakur presented the DSR before the Committee. The DSR was appraised in light of S.O. no. 3611 (E), dated 25.07.2018 of MoEF&CC, Govt. of India.

It was found during the appraisal that the DSR is not prepared as per S.O. no. 3611 (E), dated 25.07.2018 of MoEF&CC, Govt. of India.

It will be taken up for consideration after the revised DSR as per S.O. no. 3611 (E), dated 25.07.2018 of MoEF&CC, Govt. of India.

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C. Consideration of proposals :

1. Proposed expansion of existing commercial building project "Iconic Mall" from 19,953.76 sqm to 36,579.24 sqm (2B+LG+G+5) of M/s Shri Ram Sales, Mouza : Saraidhela no. 8, Thana no. : 8, Block : Dhanbad Sadar, Distt. : Dhanbad, Jharkhand.

(Proposal no.: SIA/JH/INFRA2/ 589362/2026)

Name of the consultant: Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar, Odisha

This is an existing project with the built up area less than 20,000 Sqm and as per EIA Notification, 2006 it is considered as new case and taken for appraisal on 26.08.2026.

Project Sector: 8(a) Building and Construction Projects, Category: B2.

Application for Environment Clearance (EC) as per EIA notification, 2006.

For the existing project under construction Building development permission for 19,953.76 sqm built up area was approved by Dhanbad Municipal Corporation vide File no.- DMC/BP/0124/W22/2024/ALT2, dated: 24.07.2024 and hence EC was not applicable (built-up area < 20000 sqm) and accordingly CTE was obtained from JSPCB.

For the expansion proposal application additional built-up area 16,625.48 sqm, has been applied vide file no. DMC/BP/0124/W22/2024/ALT2, dated: 24.09.2025 to Dhanbad Municipal Corporation.

As the total built-up area after expansion will be 36,579.24 sqm(built-up area > 20000 sqm), prior EC is mandatory and hence the application for same has been submitted. Details of the application are as below:

Application for Environment Clearance (EC) as per EIA notification, 2006.

Item	Details
Project Name	Proposed expansion of commercial building Project "Iconic Mall" from 19,953.76 sqm to 36,579.24 sqm [2B+LG+G+5] over Khata no. 870 and Plot No.1716 over an area of 8,330.37 sqm at Mouza: Saraidhela no. 8, Thana No.: 8, Block: Dhanbad Sadar, District: Dhanbad, State: Jharkhand by M/s Shri Ram Sales
Location	Village : Saraidhela No.8 Block: Dhanbad Sadar District: Dhanbad State : Jharkhand

Plot Area & its break – up	#	Description	Total Area (sqm)	Percentage of Plot Area (%)
	1	Proposed Ground Coverage	3902.77	46.85 %
	2	Green Area	1986.44	23.85%
	3	Internal Road & Paved Area	2282.16	27.39 %
	4	Other service Area	159.00	1.91%
	Total		8,330.37	100%
Ground Coverage Permissible	46.85%			
Ground Coverage Consumed	46.85% (3902.77 Sqm)			
FAR Permissible	2.5 (perm: 3.00)			
FAR Consumed	2.4			

Total Built-Up Area & its break – up

Floor Name	Gross Built-up Area	Deductions from Gross BUA (Area in Sqm)	Total Built Up Area (Sqm)	Existing Built-Up Area (Sqm)	Proposed Built-Up Area (Sqm)	Deductions (Area in Sqm)				Existing FAR Area (sqm)	Proposed FAR Area (sqm)	Add Area in FAR (sqm)	Total FAR Area (sqm)
						Staircase	Lift	Accessory Use	Parking				
Basement Second Floor	5430.06	9.63	5420.43	5420.43	0.00	0.00	28.69	0.00	5025.08	0.00	0.00	57.48	57.48
Basement First Floor	5430.06	9.63	5420.43	5420.43	0.00	0.00	28.69	0.00	5025.08	0.00	0.00	57.48	57.48
Lower Ground Floor	5119.8	9.63	5110.17	5110.17	0.00	0.00	28.69	186.02	3137	1700.98	0.00	57.48	1758.46
Ground Floor	4012.36	9.63	4002.73	4002.73	0.00	99.96	0.00	3.77	0.00	3870.31	0.00	0.00	3870.31
First Floor	4696.80	478.74	4218.06	0.00	4218.06	78.62	27.42	3.82	0.00	0.00	4108.20	0.00	4108.20
Second Floor	4682.4	333.25	4349.15	0.00	4349.15	79.08	27.42	3.82	0.00	0.00	4238.84	0.00	4238.84
Third Floor	4433.73	234.03	4199.7	0.00	4199.7	71.18	27.42	52.13	0.00	0.00	4048.97	0.00	4048.97
Fourth Floor	3965.83	1442.7	2523.13	0.00	2523.13	62.63	27.42	128.78	0.00	0.00	2304.31	0.00	2304.31
Fifth Floor	2423.15	1229.89	1193.26	0.00	1193.26	62.63	27.42	3.82	0.00	0.00	1099.39	0.00	1099.39
Terrace	142.18	0.00	142.18	0.00	142.18	0.00	0.00	3.82	0.00	0.00	0.00	0.00	0.00
Total	40336.37	3757.13	36579.24	19953.76	16625.48	454.10	223.17	385.98	13187.16	5571.29	15799.71	172.44	21543.44

LAND DETAILS

Khata No.	Plot No.
870 (Old khata no. 7, 5 & 30)	1716 (Old plot no. 792, 795, 796, 797 & 798)

Number of Block	1						
No. of Floor	2B+LG+G+5						
Height (m)	30.7 m						
Building Configuration	2B+LG+G+5 floors, which includes retail spaces, a food court, 3 cinema screens, a banquet hall, and 36 hotel rooms.						
Population	Approx. 4054 People						
Solid Waste	Total estimated MSW is 800 Kg/day. Breakup envisaged: Bio-degradable waste 320 kg/day (40% of SW) Non-Hazardous waste - 360 kg/day(45% of SW) Hazardous & Sanitary waste – 80 kg/day(10% of SW) E-Waste – 40 kg/day(5% of SW) Wastes will be disposed as per the specific Rules as applicable and amendments thereof.						
Parking	13,625.99 sqm 365 Cars &267 Two-Wheelersparking and other parking						
Power Requirement	<table> <tr> <td>Power Requirement</td><td>554.4KW</td></tr> <tr> <td>Energy Saving</td><td>16.23%</td></tr> <tr> <td>Power Back-up</td><td>2x1500 KVA</td></tr> </table>	Power Requirement	554.4KW	Energy Saving	16.23%	Power Back-up	2x1500 KVA
Power Requirement	554.4KW						
Energy Saving	16.23%						
Power Back-up	2x1500 KVA						
RWH Pits	3 Nos of Recharge pit						
Total Project Cost	Rs. 128.29 Crores						
EMP Cost (Construction Phase)	Capital Cost: Rs. 39.60 Lakh Recurring Cost: Rs. 4.80 Lakh						
EMP Cost (Operational Phase)	Capital Cost: Rs. 118.94 Lakh Recurring Cost: Rs. 14.97 Lakh						
Disaster Management	Ensure operational and facility preparedness by maintaining synchronized emergency backup power for critical life-safety systems, integrating automated early-warning alarms and emergency services hotlines into the central Building Management System, and conducting mandatory quarterly preventive maintenance audits across all high-risk utilities and fire-fighting infrastructure.						
Coordinate	Latitude 23°49'1.22" N to 23°49'5.48" N and Longitude 86°27'52.73" E to 86°27'57.55" E						

Land Details

Khata no.			Plot no.				
870			1716				
Population							
Description	Floor	No of Rooms	Population basis	Occupancy			
Basements & Utilities	1B & 2B	Nil (Parking)	Staff, security, and MEP maintenance	100			
Hypermarket & Retail	LG	1 Hypermarket + 5 Shops	Sales personnel and shoppers	560			
Anchor Stores & Ground Retail	G	2 Anchors + 12 Shops	Retail employees and visitors	850			
First Floor Retail	1st	18 Retail Shops	Store employees and shoppers	900			
Cinemas, Food Court & Gaming	2nd	3 Cinema Audis + 10 Food Stalls	Cinema visitors, diners, and staff	940			
Banquet Hall & Kitchen	3rd	1 Banquet + 2 Kitchens	Event guests, caterers, and staff	550			
Hotel Guest Suites	4th & 5th	36 Guest Rooms	Overnight hotel guests and staff	154			
TOTAL PROJECT	—	—	Composite Peak Population	4,054			
Water & Wastewater							
Particulars	Population	water requirement per capita per day (ltr)	Domestic water requirement		Flushing water requirement		Total Water Requirement in kLD
			Domestic water requirement per capita per day (ltr) @	Domestic water requirement in kLD	Flushing water requirement per capita per day (ltr) @	Flushing water requirement in kLD	
Staff	616	45	30	18.48	15	9.24	27.72
Guest Rooms	38	100	60	2.28	40	1.52	3.80
Restaurant	350	35	25	8.75	10	3.50	12.25
Food court & Kitchen	550	65	43	23.65	22	12.10	35.75
Multiplex	750	10	5	3.75	5	3.75	7.50
Banquet hall	300	15	5	1.50	10	3.00	4.50

Visitor	1450	10	5	7.26	5	7.24	14.50
Total	4054			65.67		40.35	106.02
Waste Water Management							
STP Calculation (KLD)							
Total Domestic Water	65.67	59.10 80% of Domestic Water is Waste Water					
Total Flushing Water	40.35	40.35 100% of Flushing Water is Waste Water					
Total Volume of Waste Water		99.45					
STP Capacity		120					
Waste Water Management (KLD)							
Volume of Treated Water from STP						94.48 KLD	
i.e., 95% of Waste Water							
Treated Waste Water Use in KLD							
Flushing						40.35	
Water sprinkling, Plantation & HVAC or Discharge to Municipal Drain (in monsoon)						54.13	
Connectivity							
Feature		Location		Approx. Aerial Distance (km)		Direction	
Railway Station		Dhanbad Junction		4.68		SW	
Airport (Nearest Airstrip)		Bokaro Airport		37.26		SW	
Operational Commercial Airport		Birsamunda Airport		128.84		SW	
Bus Stand		Dhanbad Bus Stand		3.57		SW	
National Highway		NH-32		Passing near the project site		-	
Environmental Sensitivity							

Environmental Feature	Name of Feature	Direction from Site	Aerial Distance (km)
Forest	Dhangri RF	East	1.87
	Pradhankhunta PF	South East	7.37
	Sahardhar PF	South East	8.31
	Jamari PF	West North West	8.86
	Bhuniyapaharpur PF	West North West	9.02
Water Body	Sabalpur Pond	North-East	0.59
	Khudiya River Dam	North-East	6.55
Educational Institute	Gautam Budhh High School	South East	0.15
	Abhyash Public School	South-East	0.20
	Krishlay Play School	North East	0.32
	Golden Daisy Public School	South West	0.80
	B.Y.S.N.Inter College	North East	0.87
	Shahid Nirmal Mahto Medical College	South West	0.97
	PK Roy Memorial Colleage	South West	1.84
	B.Y.S.N.Inter College	North East	0.87
	IIT (ISM) Dhanbad	South West	2.49
Healthcare / Hospital	Shri Jagannath Hospital	South West	0.29
	Super Speciality Hospital	West	0.51
	Vardaan Hospital	North East	0.78
	Pragati Hospital	South West	0.95

	Shiv Sakti Hospital	East	1.30
	Koyal Nagar Hospital	South	1.18
Solid Waste Management – Constructionphase			
Building Type	Municipal Solid Waste @0.2 Kg per Person per Day	Bio-degradable (40% of MSW)	Non-Biodegradable (60% of MSW)
Labours @0.1 Kg/Day/Person	15 Kg /Day	6 Kg /Day	9 Kg /Day
C & D Waste			
Waste Type		Tons*	
Paper and Cardboard		213.95	
Concrete		956.91	
Tiles and Ceramic		2,545.92	
Mixture		382.77	
Timber		479.33	
Plastic		0.03	
Metals		645.51	
Mixed C&D with no hazardous material		153.93	
Partition and Roofing		3,207.29	
Window Frame and Doors		4.57	
*Waste generation during entire construction period			
Solid Waste Management – Operational Phase			
Building Type (Commercial Building)	Total Floor Waste Generated (kg/day)	Bio-degradable (40% of MSW)	Non-Biodegradable (60% of MSW)
Basements, Retail & Hypermarket (1B, 2B, LG, G, 1st): 0.15 kg/capita/day	390	156	234
Banquet Hall & Kitchen (3rd): 0.18 kg/capita/day	90	36	54
Cinemas, Food Court & Gaming (2nd): 0.20 kg/capita/day	240	96	144
Hotel Guest Suites (4th & 5th): 0.40 kg/capita/day	80	32	48
TOTAL	800 Kg/Day	320 Kg/Day	480 Kg/Day

Colour Bin	Waste Type	% of Waste	Quantity (Kg/Day)	Treatment / Disposal Method
Green	Biodegradable / Organic Wet Waste (food scraps, leftover meals, vegetable peels, tissues)	40%	320.0	On-site Organic Waste Converter (OWC) / Composting for landscaping use.
Blue	Non-Biodegradable / Dry Recyclable Waste (paper, cardboard packaging, clean plastics, glass, metals, cans)	45%	360.00	Segregated, baled/stored in dedicated holding area, and handed over to authorized recyclers.
Black / Red	Domestic Hazardous Waste (fluorescent tubes, sanitary napkins, printer ink cartridges, broken glass)	10%	80.00	Handed over to the Municipal Authority for scientific landfill disposal or to TSDF
Yellow	E-Waste (spent batteries, discarded electronics, circuit boards, cables, small electrical appliances)	5%	40.00	Handed over to authorized e-waste recyclers in accordance with the E-Waste Management Rules, 2016.
TOTAL (Solid Waste)	—	100%	800.0	—

Energy Demand

The total electrical load requirements for the building—encompassing key operational systems including HVAC, lighting, escalators, and tenant power—establish a total demand load of 554.4 kW against a sanctioned load of 560 kVA. To support the mall during its operational phase, a formal request for a committed grid power supply of 500 kW has been submitted to the Electric Supply Division, Dhanbad.

In compliance with the provisions of Clause 4(a) of Category 2 Table under Notification No. S.O. 3999(E) dated 09/12/2016 published by MOEF & CC and sustainable building practices, Rooftop solar photovoltaic (PV) panels equivalent to **5%(or 16.23% of grid demand load)** of the total annual energy demand are proposed, generating approximately **347.44 kWh/day**

(based on 101 kW capacity at 4.3 peak sun hours and 80% efficiency). A total of 168 solar PV panels requiring approximately 403.2 sq. meters of rooftop area will be installed. Based on the electrical load breakdown and the 16.23% solar energy offset applied across the facility's demand profile:

Sl. No.	Category	Conventional Demand (A)	Energy Saving (B)	% of Energy Saving	Net Demand (C = A - B)
1.	Lighting Load	180.00 kW	29.21 kW	16.23%	150.79 kW
2.	Air Conditioning / HVAC Load	170.00 kW	27.59 kW	16.23%	142.41 kW
3.	Escalator Load	20.00 kW	3.25 kW	16.23%	16.75 kW
4.	Lift Load	20.00 kW	3.25 kW	16.23%	16.75 kW
5.	Food Court / Kitchen Load	24.00 kW	3.90 kW	16.23%	20.10 kW
6.	Shop Power Load	60.00 kW	9.74 kW	16.23%	50.26 kW
7.	Utility / Pump Load	42.00 kW	6.82 kW	16.23%	35.18 kW
8.	DG Room / Auxiliary Load	3.20 kW	0.52 kW	16.23%	2.68 kW
9.	Signage / External Lighting	7.20 kW	1.17 kW	16.23%	6.03 kW
10.	Miscellaneous Load	28.00 kW	4.54 kW	16.23%	23.46 kW
Total		554.40 kW	90.00 kW	16.23%	464.40 kW

Energy Conservation Measures (ECMs)

The project incorporates various energy conservation measures to minimize overall power consumption and enhance operational efficiency. The following measures have been proposed for different utilities and services within the project:

- 1. Lighting Load:** 100% LED luminaires and motion/occupancy sensors in common zones, staircases, and basements reduce lighting power density, with solar power offsetting 29.21 kW (16.23%).
- 2. HVAC Load:** High-COP/IEER rated VRF/inverter systems, programmable thermostats, BMS occupancy controls, and low-SHGC glass with insulated roofs minimize cooling loads, complemented by a 27.59 kW (16.23%) solar offset.
- 3. Escalator Load:** Sensor-controlled, variable-speed escalators switch to low-speed standby during zero-traffic periods, with 3.25 kW (16.23%) offset by solar energy.

4. **Lift Load:** Gearless VVVF regenerative drives recover braking energy, paired with automatic sleep modes for cabin lighting and fans, supported by a 3.25 kW (16.23%) solar offset.
5. **Food Court / Kitchen Load:** BEE star-rated kitchen appliances and demand-controlled ventilation (DCKV) match exhaust fan speeds to cooking intensity, with a 3.90 kW (16.23%) solar offset.
6. **Shop Power Load:** Individual retail tenant smart sub-metering and mandatory high-efficiency fixtures eliminate non-business-hour power waste, supported by a 9.74 kW (16.23%) solar offset.
7. **Utility / Pump Load:** High-efficiency IE3-rated motors, automated water-level controllers, and BMS-managed staggered starting cut peak surges, with a 6.82 kW (16.23%) solar offset.
8. **DG Auxiliary Load:** Efficient trickle chargers, temperature-controlled room ventilation, and synchronization load panels ensure optimal generator efficiency, backed by a 0.52 kW (16.23%) solar offset.
9. **Signage / External Lighting:** 100% exterior LED lighting automated via photocell twilight sensors and astronomical timers restricts operation to dusk-to-dawn hours, with 1.17 kW (16.23%) offset by solar power.
10. **Miscellaneous Load:** APFC capacitor banks maintain the power factor above 0.95 to curb distribution losses alongside automated BMS load-shedding, with a 4.54 kW (16.23%) solar offset.

Energy Performance Index (EPI)

It is a measure used to evaluate the energy efficiency of a building by comparing the total annual energy consumption with the built-up area of the building.

Initial EPI

$$EPI_{\text{Initial}} = \frac{2,630,628.00 \text{ kWh/year}}{19,953.76 \text{ m}^2} = 131.84 \text{ kWh/m}^2/\text{year}$$

Proposed / Net EPI (After Energy Conservation Measures + 101 kW Solar PV Offset)

$$EPI_{\text{Proposed/Net}} = \frac{2,109,218.20 \text{ kWh/year}}{19,953.76 \text{ m}^2} = 105.71 \text{ kWh/m}^2/\text{year}$$

The project establishes a conventional baseline energy demand load of 554.40 kW. Through the integration of energy-efficient measures—including 100% LED lighting, high-COP VRF air conditioning, low-SHGC envelope glazing, and Smart Building Management System (BMS) controls—active load consumption is reduced by approximately 15%. Further integration of a 101kW rooftop solar PV installation offsets 126,815.60 kWh/year of clean power. This dual intervention lowers the facility's annual energy requirement from 2,630,628.00 kWh/year, achieving a net ~19.82% reduction in the Energy Performance Index (EPI) relative to standard commercial baselines.

Therefore, the proposed project incorporates adequate energy-efficiency measures and renewable energy generation systems, resulting in a satisfactory EPI and improved environmental performance throughout its operational phase.

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Renewable Energy Generation (Solar)

The project proposes the use of Solar Photovoltaic (SPV) cells as a renewable energy source to reduce dependence on conventional grid electricity and promote sustainable development. Solar PV technology converts solar radiation directly into electrical energy through photovoltaic cells installed over rooftop areas and other suitable locations within the project premises.

Rooftop solar photovoltaic (PV) panels equivalent to 5%(or 16.23% of grid demand load) of the total annual energy demand are proposed, generating approximately 347.44 kWh/day (based on 101 kW capacity at 4.3 peak sun hours and 80% efficiency). A total of 168 solar PV panels requiring approximately 403.2 sq. meters of rooftop area will be installed.

- **Daily Energy Generation:**

$$\text{Daily Units} = 101 \text{ kW} \times 4.3 \text{ hrs/day} \times 0.80 = 347.44 \text{ kWh/day}$$

- **Annual Energy Savings:**

$$\text{Annual Units} = 347.44 \text{ kWh/day} \times 365 \text{ days} = 126,815.60 \text{ kWh/year}$$

- **Demand Load Offset:** The system directly shaves 90.00 kW from the peak electrical demand load, reducing grid dependence from 554.40 kW to 464.40 kW (a 16.23% net reduction).

Rain Water Recharge Pits

Catchment Area (m2)	Runoff Coefficient	Intensity of Rainfall in 24 hr (mm)	Maximum Intensity of Rainfall hourly (mm/hr)	Retention Time - Runoff (m3/15 mins)	Runoff 60 minutes (m3)
4,002.73 (Rooftop)	0.85	90	40	34.02	136.09
3,884.25 (Paved/Hardscape)	0.65	90	40	25.25	100.99
443.47 (Green Belt/Pervious)	0.15	90	40	0.67	2.66
Total Campus: 8,330.45	0.72(Weighted)	90	40	59.94	239.74

Volume of Desilting Tank (m3)	Volume of Recharge Pit (m3 per pit)	Total Volume (m3)	Runoff 15 minutes (m3)	No. of Pits Required	No. of Pits Proposed
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12.00	10.00	42.00 (12 m ³ tank + 30 m ³ pits)	34.02 (Rooftop 15-min)	3.00	3.00
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- **Desilting Tank:** Single pre-treatment RCC settling chamber measuring 3.0 m × 2.0 m × 2.0 m (12.0 m³).
- **Recharge Structures:** 3 dedicated recharge pits of 10.0 m³ each (30.0 m³ total pit volume) alongside perimeter percolation pits for green areas.
- This run-off will be drained through a network of open drain & connected to Storm Water Municipal Drain.

**Budgetary Provision
Project Cost**

Activity	Capital Cost (In Crores)
Land Cost	19.569
Building: Total Finish Civil/Electrical/Plumbing/Drainage etc.	85.638
Infrastructure: Fire Fighting/Solar PV/Roads/Transformers/DG sets etc.	23.082
Total	128.289 (~128.29)

Environmental Management Plan (EMP) Cost

A. EMP Cost for Construction Phase

S. No.	Description	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/Annum)
1	Construction site enclosure with 3 m high corrugated GI sheets	4.50	0.40
2	Acoustic enclosure for DG Set	3.00	0.00
3	Air Fogging Gun and Water Tankers for dust suppression	5.00	1.30
4	Covered shed for storage of construction materials and tarpaulin arrangements	3.00	0.70
5	Temporary septic tank and sanitation facilities	12.20	0.40
6	Drinking water and worker welfare facilities	2.00	0.20
7	Temporary storm water drainage and	2.25	0.30

	sediment traps		
8	HDPE bins and waste storage area	4.15	0.90
9	PPE, occupational health and safety measures	2.50	0.40
10	Environmental monitoring, awareness programs and miscellaneous measures	1.00	0.20
Sub-Total (A)	Construction Phase	39.60	4.80

B. EMP Cost for Operational Phase

S. No.	Description	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/Annum)
1	Development of landscaped lawns, parks and green areas	4.07	2.79
2	100 KLD Sewage Treatment Plant (MBBR/SBR Technology)	44.40	6.09
3	Solid Waste Management & OWC	30.00	3.57
4	Three Rainwater Harvesting and Recharge Pits with filtration arrangements	12.37	0.76
5	Acoustic enclosure and stack for DG Set	19.41	0.38
6	Solid Waste Management infrastructure and collection system	6.15	1.00
7	Environmental monitoring, STP sludge management, training and miscellaneous provisions	2.54	0.38
Sub-Total (B)	Operational Phase	118.94	14.97

**Environment Management Plan
During Construction Phase**

Likely to impact	Mitigation Measure
Site Clearance	✓ There are No Trees at the site.
➤ Tree Felling	✓ Water sprinkling on identified site.
➤ Dismantling of existing	✓ Store top soil at pre-determined identified site &

Likely to impact	Mitigation Measure
structure & disposal of C & D Waste ➤ Grading & Levelling of Site ➤ Removal of Top Soil	preserved.
Construction of Labour Camp	Local Labors will be hire.
Installation, commissioning, and operation of construction equipment & machineries	✓ Regular maintenance of machineries to minimize generation of noxious gases and dust. To ensure that construction equipment's are compliant to BIS Specification wherever applicable. ✓ Also, that they comply to applicable standard for emission prescribed by regulators
Earthwork Soil excavation for foundation work construction activities	✓ Use excavated soil for plinth filling or Road construction. ✓ Surplus soil to be used in own mines for plantation purpose.
Generation of Solid Waste	✓ Recyclable waste to be handed over to Rag Pickers.
Transport & Storage of construction materials	✓ Trucks carrying fine materials to be covered with tarpaulins ✓ Trucks with Pollution under Control Certificate. ✓ Toe wall along the edge of soil / sand storage to be provided to arrest flow of material during monsoon. ✓ Temporary storage yard to be constructed for proper storage of construction materials.
Water Pollution	✓ Sewage & Cess Pool is proposed to be constructed for labour. ✓ Drinking water facility to be provided. ✓ Collection of surface run-off from active construction area and channelize them to de-siltation pond. Desilted water to be let off to natural drainage.
Hazardous Waste	✓ Used oil from construction equipment's will be collected in HDPE containers and handed over to authorized recyclers. ✓ Used cans of paints, varnished to be handed over to authorized recycler.

Likely to impact	Mitigation Measure
Noise Pollution (Noise generated by construction equipment's)	✓ Regular repair & maintenance of equipment's. ✓ Providing acoustic barrier around periphery of construction site (3.5 m high GI Sheet). Boundary wall has already been constructed around the project area. ✓ DG set will be provided as per the norms of CPCB.
Environment Monitoring	✓ Regular environment monitoring will be done covering noise, air & water quality, during half yearly EC Compliance.
Arrangement of Water for Construction	✓ Create water storage tank to store water procured through water tankers / ground water abstraction.

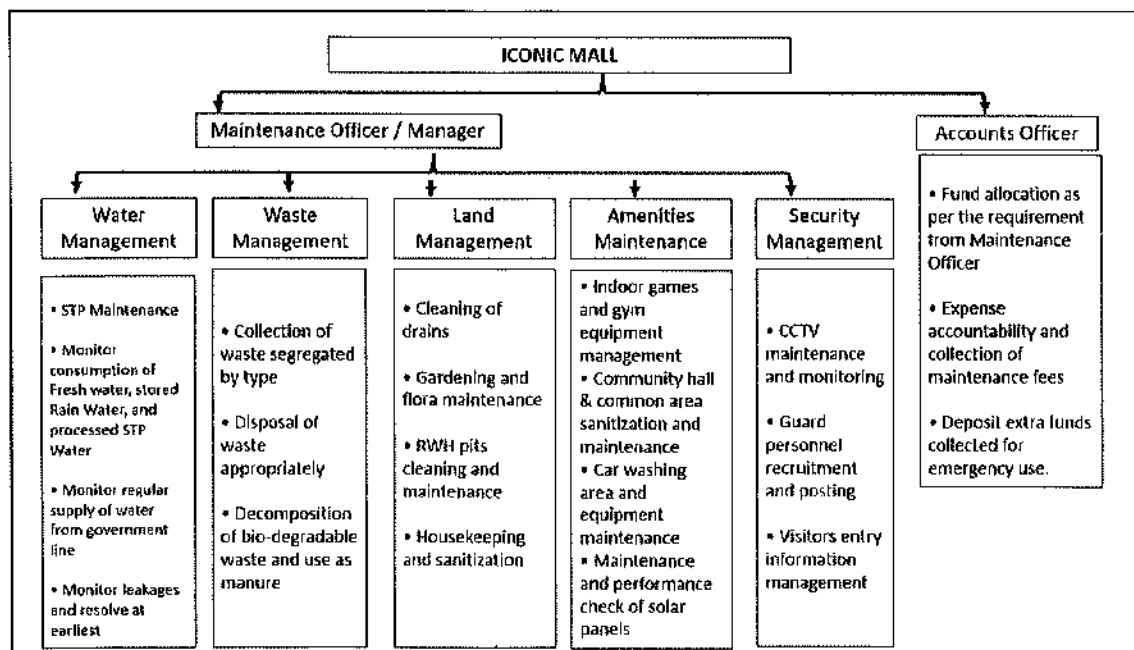
During Operational Phase

Attributes	Environmental Issues	Impact	Mitigation Measure
Air Environment	Movement of Vehicles along internal Road	Generation of dust & noxious gases	✓ Water sprinkling on internal Roads. ✓ Create grass cover on open spaces. ✓ Internal Roads to be paved. ✓ Avenue Plantation ✓ Plantation along periphery of project premises. ✓ Enforce speed limit for vehicle within project area.
Noise Environment	Movement of Vehicles along internal Road	Noise	Ensure ✓ Restrict speed limit to 20 KMPH. ✓ Enforce no Horn Zone.
Solid Waste Management	Generation of Municipal Solid Waste	Unhygienic Condition	Collection of ✓ Bio-Degradable Waste ✓ Recyclable Solid Waste ✓ Non-Recyclable Solid Waste ✓ Hazardous Waste Disposal ✓ Recyclable waste to be handed over to rag pickers. ✓ Bio-Degradable & Non-Recyclable solid waste to be converted into

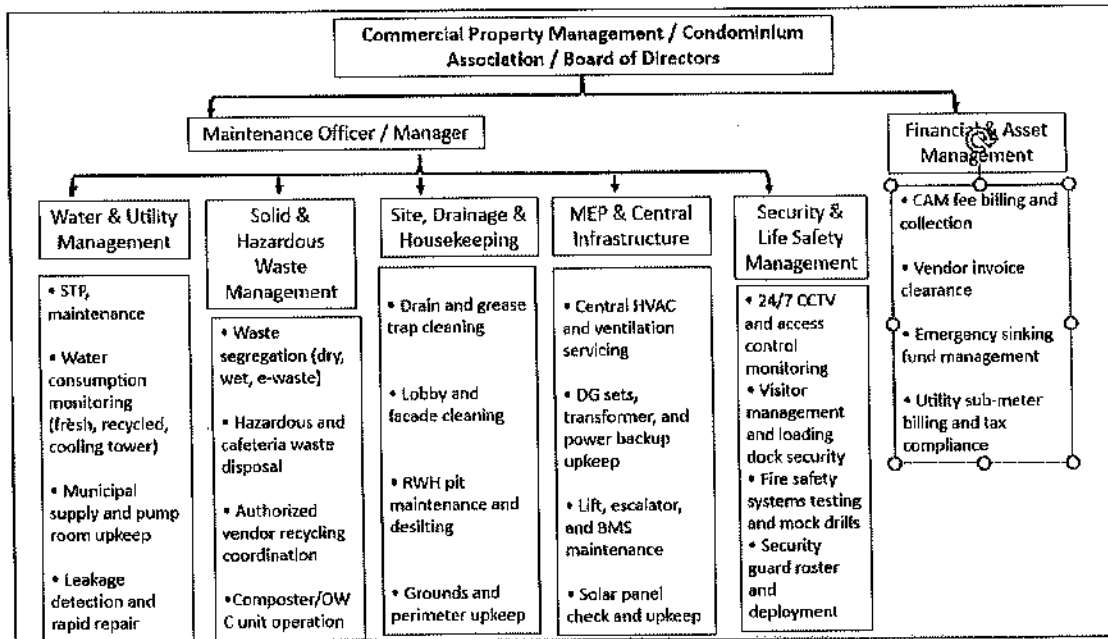
Attributes	Environmental Issues	Impact	Mitigation Measure
			fertilizer through OWC. Hazardous waste to be handed to authorized hazardous Waste Management Facility.
	Generation of Sludge from STP	Unhygienic Condition	A sludge treatment & recovery plant will be installed along with the STP. The product may be utilized as fertilizer.
Water Environment	Generation of Sewage	Waste Water	✓ Provision of STP for treatment of waste water & recycling
	Storm Water	Surface run-off may carry suspended solid during monsoon	✓ Provide a network of storm water drains terminating into de-siltation tank. This tank would be connected to storm water drainage system.
	Roof top rainwater harvesting system	Loss of rainwater	✓ Provide rainwater harvesting system with drawdown pipes & harvesting pits.

Organizational Structure

During Construction Phase



Operational Phase



STATUTORY CLEARANCES

1	Land Docs	:	Development Agreement vide Receipt Number: bub5e898495ad7543a, dated; 12.12.2022
2	DFO Territorial	:	DFO, Dhanbad Forest Division vide letter no. 1017, dated 22.04.2024 certified that the distance of reserved/protected forest is 1500 meters approx. from project site.
3	DFO Wildlife	:	DFO, Wildlife Division, Hazaribag vide letter no. 772, dated 08.05.2024 certified that proposed project site is out side Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
4	CO certificate	:	The CO, Dhanbad vide memo no. 800, dated 07.08.2024 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in R.S. Khatiyar & Register II.
5	Consent to Establish (CTE)	:	CTE issued by JSPCB vide Ref. No. JSPCB/HO/RNC/CTE-24747301/2026/107, dated 02.05.2026. (Mall with Built up area 19,953.76 sqm.)
6	Building Plan approval	:	Building plan approved by Dhanbad Municipal Corporation vide memo no. DMC/BP/0217/W22/2024, dated 01.08.2024. For expansion of 16,625.48 sqm built-up area, the proposal is applied vide file no. DMC/BP/0124/W22/2024/ALT2, dated: 24.09.2025.
7	Fire Department	:	Fire Advisory has been issued by Fire Department, Jharkhand,

		Ranchi, vide memo no. 2066/Tech./2024, dated 16.03.2024.
8	CGWA	: No Objection Certificate (NOC) for withdrawal of water has been obtained from CGWA vide No. NOC/INF/JH/2026 /4728-REV-1/N, dated 30.06.2026 valid up to 29.06.2028.
9	Certificate by LTP by DMC	: Ajit Kumar, Chartered Engineer and LTP of Dhanbad Municipal Corporation for Iconic Mall undertakes that construction till date is approximately 15,572 sqm.

Based on the presentation made and information provided, the Committee decided that the proposal for Proposed expansion of existing commercial building project "Iconic Mall" from 19,953.76 sqm to 36,579.24 sqm (2B+LG+G+5) of M/s Shri Ram Sales, Mouza : Saraidhela no. 8, Thana no. : 8, Block : Dhanbad Sadar, Distt. : Dhanbad, Jharkhand is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – IV alongwith the following specific conditions :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. Ground water to be drawn for use in the project only after obtaining permission from the Competent Authority.
- III. Environment management system including organization structure to be drawn to ensure compliance of EC conditions stipulated based on principles of Continual Improvement and periodical management review.
- IV. All raw material to be stored only under covered shed.
- V. PAs to offset (upto20%) consumption of conventional energy sources by promoting use of solar energy, passive energy utilization, optimum fenestration, shading effect and heat islands.
- VI. Developers to promote energy conservation measures such that it offsets not less than 02 % of connected load.
- VII. Trees should be developed & maintained not less than 15% of project area.
- VIII. Organic Waste Converter (OWC) to be installed of sufficient capacity such that all organic waste (bio degradable) generated is composted at source only.
- IX. Developers/Company to install STP of sufficient capacity such that all the sewer produced is treated and reused.
- X. Developers/Company to install Rain water harvesting structures such that all the roof top water runoff is collected and harvested including reuse on 100% basis.

- XI. Developers/Company to conduct and submit carbon footprint and carbon sequestration study report including mitigation measures as a part of EC compliance.
- XII. Water runoff originating from open non constructed areas of project premises to be harvested /guided in such a way that it does not create water logging condition outside.
- XIII. Sufficient number of EV fast charging points to be installed.
- XIV. MSW Collection centre should be located in isolated and preferably unmanned area. Movement of the vehicle carrying waste should be under tarpaulin covered condition only. Route of vehicle should be such that it avoids residential areas as far as practical.
- XV. ISO 14k EMS system standard to be followed for implementation of EMPs with MRM in place for feedback to Sr management.

**2. Expansion of Residential Project "Pearl the Central Park" of M/s Moti Infraheights Pvt. Ltd.,
Village : Argora, Thana : Argora, Distt. : Ranchi, Jharkhand.**

(Proposal no.: SIA/JH/INFRA2/ 586452/2026)

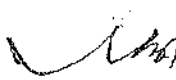
Name of the consultant: P & M Solution, Noida, U.P.

This is an expansion project which has been taken for appraisal on 26.08.2026.

Project Sector: 8(b) Townships and Area Development Projects, Category: B1.

Application for Terms of Reference (ToR) as per EIA notification, 2006.

- Existing plot area: 36,436.14 sq.m
- Phase-I infrastructure constructed comprises 705 dwelling units including 234 LIG/ EWS units, along with basement parking, internal circulation roads, landscaping and associated infrastructure facilities with a built-up area of 148,889.20 sq.m.
- Proposed Phase-II infrastructure includes additional residential towers, EWS housing, basement parking, internal circulation roads, landscaping, utility services and supporting infrastructure facilities.
- Total Existing Built-up Area (Existing Phase-I): 148,889.20 sq.m.
- Proposed Additional Built-up Area (Phase-II): 555,983.03 sq.m.
- Total Built-up Area (Post Expansion): 704,872.23 sq.m.
- Total Plot Area: 135,367.50 sq.m.
- Total Project Cost: 500 Crore (As per Existing EC- 97.0 Crore).

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- Expansion of Residential Project "Pearl The Central Park" at Mauza – Mauza–Argora, Khata Nos. 79, 84, 80, 113, 41, 27, 18, 77, 15, 124, 34, 88, 188, 206, 116, 83, 158 and 197. Plot Nos. 889, 890, 891, 893, 894, 895, 898, 897, 1055, 1054, 1053, 900, 899, 901, 966, 1051, 1050, 1052, 970, 1048, 1047, 1046, 968, 967, 964, 963, 965, 903, 902, 904, 905, 906, 907, 908, 909, 910, 962, 959, 960, 961, 957, 958, 953, 932, 933, 952, 951, 950, 974, 975, 972, 973, 2594, 2595, 2600, 2599, 2596, 2597, 2590, 2591, 2592, 2578 and 914, Thana–Argora, Tehsil–Argora, District–Ranchi, State–Jharkhand.
- Built-up Area: 704,872.23 sq.m.

Project and Location details

Parameters	Descriptions
Total Plot Area	135,367.50 Square Meter (33.45 Acre)
Total Built-up Area	704,872.23 Square Meter
Project Cost	INR 500 Crores
Proposed FAR	3.5
Total Green Area (@ 15.27% of plot area)	20,669.70 Square Meter
Population	25252 Persons
Water Requirement	2378 KLD
Fresh Water Requirement	1663 KLD
Wastewater Generation	2045 KLD
STP	Total Capacity : 2100 KLD STP of Capacity (3*300 KLD+1*550 KLD+1*650 KLD)
OWC Capacity	5000 kg/Day
Total Municipal Waste	11,570 kg/day
Power Requirement	Maximum power demand for the project during operation phase is estimated to be 20000 kVA whereas during construction phase 4500 kVA. Source of power will be state Electricity Board.
DG Sets	5 no. of DG set of Total 1500 KVA
RWH Pits	Approx. 13 Nos.

Parking Area	146,000 Square Meter
No. of Car Parking	4606 cars

Surroundings of the Project Site:

S. No.	Features	Description
1	Nearest Habitation	- Pearl Crest Apartment (80 m, NE) - Argora (Project site is located in Argora) - Kuenartali (300 m, SE) - Pundag (900 m, W) - Dugdugiyatoli (500 m, NW)
2	Nearest City	Ranchi (project site is located in Ranchi city)
3	Nearest school/ college	- Vikas Public School (160 m, W) - Institute of Science and Management (225 m, NW) - Prabhat Primary School (1.4 km, ESE)
4	Nearest water body	- Argora Talab (0.80 km, NE) - Ranchi Lake (3.40 km, NE) - Kanke Dam (5.00 km, NNE) - Chota Dam (4.60 km, SW) - Dhurwa Dam (5.60 km, SW)
5	Nearest Road	- Pundag Road (0.02 km, North) - Harmu Road (0.80 Km, East) - NH 39 (4.30 Km, SW)
6	Nearest Hospital	- Radha Rani Mission Hospital (200 m, E) - Devkamal Hospital (1.2 km, E)
7	Nearest Railway Station	Argora Railway Station (2.55 km, East)
8	Nearest Airport	Birsa Munda Airport (3.15 km, SW)
9	Nearest Temples	- Maa Maha Kali Mandir, (0.03 km, North) - Shri Shiv Shakti Mandir (0.40 km, East)

CO-ORDINATES

1	Longitude	85°17'16.65"E
2	Latitude	23°20'47.63" N

AREA STATEMENT

S. No.	Description	Existing Details as per EC	Proposed Details	Total Development after Expansion
1	Plot Area	36,436.14 (9 Acre)	98931.36 (24.45 Acre)	135,367.50 (33.45)

	(sq.m)			Acre)
2	Ground Coverage (sq.m)	8,340.99 (22.89% of Plot Area)	30985.78 (31.32%)	39,326.77(29.05%)
3	FAR Area (sq.m)	125,704.68 (@ 3.45 FAR)	348,284.45@ 3.5 FAR	473,989.13@ 3.5 FAR
4	Non-FAR Area (sq.m)	23,184.51	207,698.59	230,883.10
5	Built-up Area (sq.m)	148,889.20	555,983.03	704,872.23
6	Basement Area (sq.m)	21,500.00 (Basement-1 + Basement-2)	130,000 (Basement-1 + Basement-2)	151,500(Basement-1 + Basement-2)
7	Parking Area (sq.m)	18,644.00	127,356	146,000
8	No. of Car Parking	806 Nos.	3800	4606
9	Green Area (sq.m)	5,830.00 (16.00% of Plot Area)	14839.70(15% of plot area)	20,669.70 (15.27% of Plot Area)
10	No. of Dwelling Units Excluding LIG & EWS	705 Nos.	2198	2903
11	No. of EWS Units	234 Nos.	448	682
12	No. of LIG Units		210	210
13	Total Nos. of Dwelling Including LIG & EWS	939	2856	3795
14	Height (m)	44.32 m	44.32 m	44.32m
15	No. of Floors	2 Basements + Ground + 13 Floors	2 Basements + Ground + 13 Floors in all blocks except LIG Blocks with 14 Floors	2 Basements + Ground + 14 Floors

16	No. of Towers/Blocks	6 Blocks (A, B, C, D,E,CLUB HOUSE,)	30 Blocks (E1, F, G,H,J (AMENITY AT GROUND FLOOR),K,L,M,N,P1,P2,P3,Q,R(AMENITY AT GROUND FLOOR),S,T,U,V,W,X,Y1,Y2,Y3,Y4,Z1,Z2,Z3,Z4,Z5& Commercial)	35 Blocks (A,B,C,D,CLUB HOUSE, E1, F, G, H, J (AMENITY AT GROUND FLOOR),K,L,M,N,P1,P2,P3,Q,R(AMENITY AT GROUND FLOOR),S,T,U,V,W,X,Y1,Y2,Y3,Y4,Z1,Z2,Z3,Z4,Z5 & Commercial)
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Total Built-up Area Breakup Details: (Square Meter)

Floor	Total Built-up Area (sq.m)
Basement Floor Area	130,000.00
Ground Floor Area	27,424.05
1st Floor Area	31,021.01
2nd Floor Area	31,021.01
3rd Floor Area	31021.01
4th Floor Area	31,021.01
5th Floor Area	31,014.44
6th Floor Area	31,014.44
7th Floor Area	31,014.44
8th Floor Area	31,014.44
9th Floor Area	30,914.44
10th Floor Area	30,914.44
11th Floor Area	30,914.44
12th Floor Area	30,914.44
13th Floor Area	26,759.42
Existing Built-up Area	148889.20

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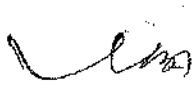
Total Built-up Area (Including Parking)	704872.23
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STATUTORY CLEARANCES

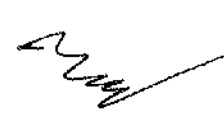
1	Land Docs	:	A part of land is owned by the Project Authority and rest is acquired on development agreement.
2	DFO Territorial	:	DFO, Ranchi Forest Division vide letter no. 708, dated 28.02.2022 and letter no. 2056, dated 01.07.2026 certified that the distance of reserved/protected forest is more than 250 m from project site.
3	DFO Wildlife	:	DFO, Wildlife Ranchi division vide letter no. 250, dated 16.03.2022 and letter no. 478, dated 25.06.2026 certified that proposed project site is out side Eco Sensitive Zone of Palkot Wildlife Sanctuary.
4	CO certificate	:	The CO, Argora, Ranchi vide letter no. 421(ii) dated 03.08.2022 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in Khatyan.
5	AAI NOC	:	Airport authority of India issued NOC vide NOC ID no. RANC/EAST/B/ 042622/668391, dated 26.05.2022 valid up to 25.05.2030.
6	Building Plan approval	:	Earlier the Building plan was approved for an area of 148564.46 SQM vide letter number RMC/GH/1528/W36/2022 dated 18.10.2023, The rest remaining area (5,56,307.77 Sqm.) is currently on conceptual plan.
7	Fire Department	:	Fire Advisory has been issued by Fire Department, Jharkhand, Ranchi, vide memo no. 3961/Tech./2022, dated 16.10.2022.
8	Consent to Establish (CTE)	:	CTE issued by JSPCB vide Ref. No. JSPCB/HO/RNC/CTE-14226214/2023/99, dated 07.02.2023.
9	Previous Environmental Clearance (EC)	:	Previous EC granted by SEIAA, Jharkhand vide letter no. EC/SEIAA/2022-23/2629/2022/241, dated 02.09.2022.

POPULATION DETAILS

S. No.	Category	No. of Units/Area sqm.	Standard	Population
As Per Existing EC, Population				
1	Main Residents	939 Dwelling Units	@ 5 persons / DU	4695







2	Visitors	—	-	235
3	Staff	—	-	94
	Total	-	-	5024
Proposed Population				
4	Residents (EWS 1 BHK)	448 Dwelling Units	@ 4 persons / DU	1792
5	Residents (LIG 2 BHK)	210 Dwelling Units	@ 5 persons / DU	1050
6	Residents (2 BHK)	78 Dwelling Units	@ 5 persons / DU	390
7	Residents (3 BHK)	1688 Dwelling Units	@ 6 persons / DU	10128
8	Residents (3 BHK+Servant)	136 Dwelling Units	@ 7 persons / DU	952
9	Residents (4 BHK)	163 Dwelling Units	@ 7 persons / DU	1141
10	Residents (4 BHK+Servant)	109 Dwelling Units	@ 8 persons / DU	872
11	Residents (5 BHK)	24 Dwelling Units	@ 8 persons / DU	192
	Total Residents	3795 Dwelling Units		16517
12	Visitors	—	@ 10% of residents	1652
13	Staff	—	@ 5% of residents	826
-	Commercial Area	12325.98 sqm	1 person/ 10sqm	1233
14	Visitors	—	@ 90% of population	1110
15	Service Staff	—	@ 10% of population	123
	Total Population			25252 persons

WATER REQUIREMENT DETAILS

Category	Population/Area (sq m)/Capacity	Standard (LPCD)	Water Requirement-KLD	Fresh Water Requirement-KLD	Recycled Water requirement-KLD
Domestic					
Residents	16517	100	1652	1156	496
Staff	949	45	43	30	13
Visitors	2762	15	41	29	12
As Per Existing EC Population	5024	-	642	448	194
Total Domestic Water Demand			2378	1663	715
Landscape	20,669.70sqm	5 l/day	103	-	103
DG Cooling/ miscellaneous	-	-	15	-	15

Fire Fighting	--	--	8	--	8
Total			2504	1663	841

WASTE WATER CALCULATIONS

Category	Total Quantity (KLD)
Fresh water Req.	1663
Flushing water Req.	715
Sewage generation (@80% of the fresh water consumption + 100% flushing water)	2045
Capacity of STP	2100 KLD (3*300 KLD+1*550 KLD+1*650 KLD)
Recovered water from STP (90% of Waste water)	1841
1. Flushing	715
2. Landscaping	103
3. DG Cooling	15
4. Fire Fighting	8
5. Discharge to Sewer/Car washing/ Road Washing	1000

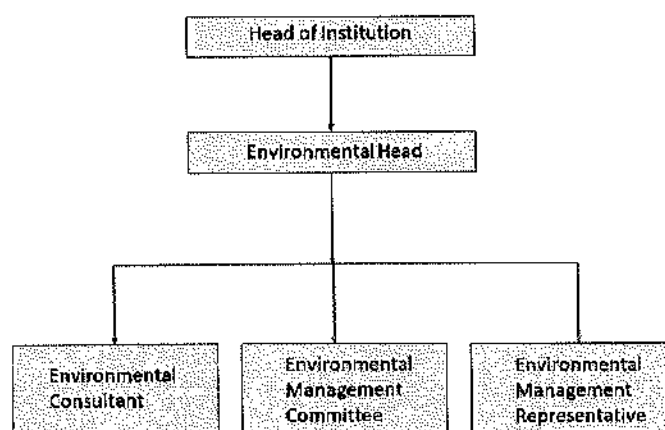
SOLID WASTE GENERATION

S. No	Description	Occupancy/Area	kg/capita/day	Total Solid Waste Generation (kg/day)	Recyclable (kg/day)	Non-Recyclable (kg/day)
1.	Residents	21212	0.5	10606	4242	6364
2.	Staff	1043	0.25	262	105	157
3.	Visitors	2997	0.15	450	180	270
4.	Landscape waste	20669.7	--	82	82	0
5.	STP sludge	2045 KLD Sewage	--	170	170	0
Total Waste Generated				11570	4779	6791

EMP Cost – Approx. cost during Operational Phase

S. No.	Activity	Capacity/ Area/Nos./parameters	Capital Cost (Lacs)	Annual Recurring Cost (Lacs)
1.	STP	2100 KLD	80	20
2.	Landscaping & planting trees	20669.70 sq m	20	5
3.	Solid waste Management (OWC-5000kg/day)	Municipal waste- 11570 kg/day	60	15
4	RWH Pit Installation	13 pits	80	20
5	Energy Saving	5 %	20	4
6	Environmental Monitoring*	Air, water, soil and noise	-	1
Total			260	65

ORGANIZATION STRUCTURE



ENVIRONMENT MANAGEMENT

Green belt development

- Total green area proposed is 20,669.70 sq.m (approximately 15.27 % of the total plot area).
- Initiation of the green belt during the construction phase itself.

- This green belt and greenery developed around the project periphery would cover approximately 15% of the plot area.
- Approximately 1692 trees are proposed within the residential campus.
- Native and pollution tolerant species shall be planted.
- Treated wastewater shall be utilized for irrigation of landscaped areas.
- The plant species will be selected on the basis of Guidelines for Developing Green Belts, CPCB March 2000.

Environment Monitoring Programme

S. No.	Description	Locations	Duration	Budget
1.	Ambient Air Quality	Project Site	Half yearly	20000
2.	Groundwater (Portability testing)	Project site	Half Yearly	7500
3.	Ambient Noise	Project site	Half Yearly	7000
4.	Soil quality	Project site	Half Yearly	8000
5.	Surface water	Outlet of STP	Half Yearly	7500

Suggested Monitoring Program for Project

S. No.	Type	Locations	Parameters	Period and Frequency
1.	Ambient Air Quality	Project Site	Criteria Pollutants: SO ₂ , NO ₂ , PM _{2.5} & PM ₁₀	Half yearly (24 hr average samples) during construction phase and annual during operation phase.
2.	Groundwater (Portability testing)	Project site	Drinking water parameters as per IS 10500.	Half Yearly
3.	Ambient Noise	Project site	dB (A) levels	Half Yearly (Hourly day and night time L _{eq} levels) during construction phase and every year during operation phase.

4.	Potable water quality	Drinking water supply	As per IS 10500 potable water standards	Half Yearly
5.	Soil quality	Project site	Organic matter, C.H., N, Alkalinity, Acidity, heavy metals and trace metal, Alkalinity, Acidity.	Half Yearly
6.	Waste Characterization	Municipal waste	Physical and Chemical composition	Daily
7.	Treated water	Outlet of STP	BOD, MPN, coliform count, etc.	Monthly

Solid Waste Management

During Construction Phase

- Designated construction material storage areas shall be provided within the project site. These would be segregated as recyclable/ reusable and discarded materials.
- Excavated topsoil shall be stored separately and reused for landscaping and green belt development.
- Remaining excavated soil shall be utilized for backfilling, site levelling, and internal road development, to the extent feasible.
- Separate waste collection bins/containers shall be provided for collection and segregation of waste generated by construction workers.
- Construction and Demolition (C&D) waste shall be managed in accordance with the Construction and Demolition Waste Management Rules and applicable guidelines.
- Recyclable materials such as steel scrap, cement bags, cardboard, plastic, oil and packaging materials shall be collected separately and handed over to authorized recyclers.
- Adequate housekeeping practices shall be maintained throughout the construction period.

During Operation Phase

- Waste shall be segregated at source into biodegradable, recyclable, sanitary, biomedical (where applicable), domestic hazardous, and other waste streams as per the applicable Solid Waste Management Rules, 2026.
- Color-coded bins shall be provided at appropriate locations throughout the campus for segregation and collection of different categories of waste.

- Horticultural waste shall be composted and reused for landscaping and green belt development.
- Recyclable waste such as paper, plastic, glass, metal, and cardboard shall be handed over to authorized recyclers.
- STP sludge generated from sewage treatment plants shall be utilized as manure for horticulture and landscaping activities, wherever feasible.
- Domestic hazardous waste shall be stored separately and disposed of through authorized agencies in accordance with applicable regulations.
- The overall solid waste management system shall ensure environmentally sound collection, segregation, storage, processing, transportation, recycling, and disposal of waste in compliance with statutory requirements.

Water Quality Management

During Construction Phase

- Water requirement will be met through water tankers.
- Mobile toilets shall be provided for construction workers.
- Wastewater arising from the project shall be disposed of conforming to standards of CPCB by septic tanks/ soak pits.
- Proper site drainage and housekeeping shall be maintained.

During Operation Phase

- STP of total capacity 2100 KLD(3*300 KLD+1*550 KLD+1*650 KLD) will be provided.
- Approximately 1841 KLD treated wastewater will be reused for flushing, landscaping, HVAC cooling, DG cooling and fire-fighting.
- Dual plumbing system will be adopted.
- Rainwater harvesting pits will be provided for groundwater recharge.

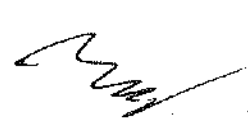
Air Quality Management

- Warehouse/stock yard will be provided for storage of construction material
- Covering of stored construction materials with tarpaulin covers which will be resold to authorized construction material handling agency for reuse.
- Covering of trucks carrying construction materials.
- Dust suppression by water sprinkling at site and haulage road.
- Adequate maintenance of construction equipment & vehicles.
- Wheel wash facility at the entry/exit of the site to prevent dust emissions.
- Periodical Ambient Air Quality Monitoring.
- Provision of stacks with DG sets as per CPCB norms and usage of low sulphur fuel in DG sets
- Initiation of the green area development in construction stage itself
- Glow signs Speed Limits to 20 kmph to reduce emissions on site will be displayed at the important junctions.

Energy conservation







- Energy efficient lifts will be installed at the site
- Solar street lights will be provided in ratio of 1:3
- CFL/LED Lighting Fixtures for internal lighting.
- Energy Efficient Motors and Pumps.
- BEE Star Rated Electrical Equipment.
- Copper Bus Bars in Electrical Panels.
- Heat Reflective Roof and Wall Coatings.
- Approximately 5% of total energy demand met through solar energy.
- No fenestration provided on the west facing side of the building. West facing will be blocked
- All windows of all rooms open to outside so as the day light enters in all the flats

Undertaking

- An undertaking that no ground water will be used without any prior approval from CGWA
- E-waste shall be handed over only to authorized recyclers.
- Solid waste shall be managed as per applicable Solid Waste Management Rules 2026.
- Approximately 5 % of total energy consumption shall be met through renewable energy.
- The project shall comply with all applicable environmental regulations and statutory requirements.

Baseline monitoring period March, 2026 to May, 2026.

Based on the information contained in the documents submitted and the presentation made before the State Level Expert Appraisal Committee (SEAC) during its meetings held during 23, 24, 25, 26 & 27.08.2026, the Committee recommends for issuing of ToR to SEIAA for undertaking detailed EIA / EMP study as mentioned in Annexure - V alongwith following specific condition :-

- I. In compliance of OM no. F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "*Ek Ped Ma Ke Naam*" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. Certified Compliance Report (CCR) should be obtained from Regional Office, Ranchi, MoEF&CC, Govt. of India and to be submitted alongwith application for consideration of final EC.

3. Expansion of Residential Group Housing Project of M/s Oceanik Buildtech and Construction Pvt. Ltd., Village : Morabadi, Tehsil : Ranchi, Distt. : Ranchi, Jharkhand.

(Proposal no.: SIA/JH/INFRA2/ 588501/2026)

Name of the consultant: P & M Solution, Noida, U.P.

This is an expansion of existing project for which only CTE and EC have been granted and taken for appraisal on 26.08.2026.

Project Sector: 8(a) Building and Construction Projects, Category: B2.

Application for Environment Clearance (EC) as per EIA notification, 2006.

Existing plot area – 9,517.99 sq.m

Existing (constructed) built-up area – 10,337.15 sq.m(although EC was approved for 40,209.63 sq.m)

Proposed total plot area – 9,502.69 sq.m

Proposed additional built-up area – 10,060.57 sq.m

Proposed total built-up area –50,270.20 sq.m

Project Cost – 80 Crores(prior EC approval for only 67.05 Crores)

The project namely "Residential Group Housing Project", located at Village Morabadi, Thana Morabadi, Near Asha Shree Garden, Ranchi, Jharkhand, was granted prior Environmental Clearance (EC) by SEIAA, Jharkhand vide Letter No. EC/SEIAA/2020-21/2316/2021/64 dated 15.07.2021 in favour of M/s Morias Infrastructure Pvt. Ltd. for a total approved built-up area of 40,209.63 sq.m. Subsequently, the Environmental Clearance was transferred in favour of M/s Oceanik Buildtech and Construction Pvt. Ltd. vide Transfer of EC issued by SEIAA, Jharkhand on 08.07.2025 under Proposal No. SIA/JH/INFRA2/537987/2025

The project proponent proposes to revise the overall project configuration and complete the remaining development as per the revised building plan. The revised project comprises one residential tower (B+G+20+Terrace Floor) over a gross plot area of 9,502.69 sq.m, net plot area of 9,111.07 sq.m, and total built-up area of 50,270.20 sq.m, comprising 264 dwelling units along with essential facilities such as parking, STP, storm-water drainage, rainwater harvesting, solid waste management, fire-fighting, internal circulation, and landscaping/green area.

PROJECT AND LOCATION DETAILS

Parameters	Descriptions
Total Plot Area	9,502.69 Square Meter
Total Built-up Area	50,270.20 Square Meter
Project Cost	INR 80 Crores
Proposed FAR	3.5

Total Green Area (@ 22.30% of plot area)	• Total Green Area: 2,118.99 sq.m. (@ 22.30% of Plot Area) • Green Belt / Tree Plantation Area: 1,425.33 sq.m. (@ 15.00% of Plot Area) • Landscape Area (excluding Tree Plantation): 693.66 sq.m. (@ 7.30% of Plot Area)
Population	1804 Persons
Water Requirement	164 KLD
Fresh Water Requirement	115 KLD
Wastewater Generation	141 KLD
STP Capacity	150 KLD
Organic Waste Convertor (OWC)	400 kg/day
Total Municipal Waste	1,149 kg/day
Power Requirement	Maximum power demand for the project during operation phase is estimated to be 1400-1500 kW. Source of power will be Jharkhand State Electricity Board.
DG Sets	Total 1560 kVA (2*360 kVA + 1*340 kVA+ 500 kVA)
RWH Pits	Approx. 7 Nos.
Parking Area	14,147.37 sq. m.

LAND DETAILS

Khata No.	Plot No.
3	46, 51 & 52

SURROUNDINGS OF THE PROJECT SITE:

Near-by Residential Areas	• Chaputoli (0.41 km, SW) • Chiraundi (1.23km, N) • Soren Kunj (0.73 km, S) • Doctors Colony (1.49km, E)
Nearest City/Town	• Project site is located in Ranchi city
District Headquarters	• Ranchi (project site is located in Ranchi city)
Nearest Schools& Colleges	• Modern Public School (0.56 km, S) • Cambrian Public School Kanke Road Ranchi (2.23 km, SW) • Oxford Public School (2.19 km, NE)
Nearest Hospitals	• Hill View Hospital and Research Centre (1.67 km, E) • Heath Point (1.47 km, NE) • Alam Hospital and Research Centre (1.98 km, E)

Nearest Water Bodies	• Divyan Lake (0.42 km, SE) • Karam toil talaab (1.53 km, S) • Kanke Dam (2.27 km, w) • Ranchi Lake (3.84 km, SW) • Line Tank lake (3.17 km, SW)
Nearest Highway & Road	• NH 23 (2.61 km, S) • 7 m road (in South Direction)
Nearest Railway Station	• Ranchi Junction Railway Station (5.6 km, S)
Nearest Airport	• Birsa Munda Airport (9.26 km, S)

COORDINATES

	Longitude	Latitude
1	85°20'07.81" E	23°24'00.97" N
2	85°20'05.27" E	23°24'00.07" N
3	85°20'06.03" E	23°24'02.34" N
4	85°20'09.78" E	23°23'58.82" N
5	85°20'10.65" E	23°24'01.11" N

AREA STATEMENT

S. No.	Description	Area / Details as per Existing EC	Revised Project Configuration after Expansion/Amendment
A.	Plot Area	9,517.99 sq.m.	9,502.69 sq.m.
B.	Road Widening Area	391.63 sq.m.	391.63 sq.m.
C.	Net Plot Area (A-B)	9,126.36 sq.m.	9,111.07 sq.m.
D.	Proposed Ground Coverage	2,596.64 sq.m. (@ 28.45% of Net Plot Area)	3,752.70 sq.m. (@ 41.19% of Net Plot Area)
E.	Proposed FAR Area – Residential	30,109.30 sq.m. (@ FAR 3.16)	33,233.63 sq.m. (@ FAR 3.50)
F.	Non-FAR Area (Basement & Lower Ground Parking Area)	7,757.93 sq.m.	11,290.63 sq.m.
G.	Non-FAR Area (Staircase, Lift, Balcony, Ramp, Accessory Use)	2,342.40 sq.m.	5,745.95 sq.m.
H.	Built-up Area	40,209.63 sq.m.	50,270.20 sq.m.
I.	Green Area	3,302.62 sq.m. (@	• Total Green Area: 2,118.99

		34.69% of Plot Area)	sq.m. (@ 22.30% of Plot Area) • Green Belt / Tree Plantation Area: 1,425.33 sq.m. (@ 15.00% of Plot Area) • Landscape Area (excluding Tree Plantation): 693.66 sq.m. (@ 7.30% of Plot Area)
J.	Driveway, Open Parking Area & Open Area	3,227.10 sq.m.	10,285.29 sq.m.
K.	Height	47 m	77.5 m
L.	No. of Dwelling Units	142	264
M.	No. of Residential Buildings / Towers	3 Nos. – Block A, Block B & Block C	1 No. Residential Tower
N.	Block / Tower Configuration	Block A: B+LGF+GF+14 Floors+Terrace Floor Block B: G+11 Floors+Terrace Floor Block C: G+11 Floors+Terrace Floor	B+G+20 Floors + Terrace Floor

Floor wise built-up area

S. No.	Floor	Built-up Area (sq. m.)
1	Basement Floor	5,899.58
2	Ground Floor	3,760.71
3	First Floor	2,634.04
4	Second Floor	1,998.93
5	Third Floor	1,999.89
6	Fourth Floor	1,998.93
7	Fifth Floor	1,999.89
8	Sixth Floor	1,998.93
9	Seventh Floor	1,999.89
10	Eighth Floor	1,998.93
11	Ninth Floor	1,999.89
12	Tenth Floor	1,998.93
13	Eleventh Floor	1,999.89
14	Twelfth Floor	1,998.93
15	Thirteenth Floor	1,999.89
16	Fourteenth Floor	1,998.93
17	Fifteenth Floor	1,999.89

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18	Sixteenth Floor	1,998.93
19	Seventeenth Floor	1,999.89
20	Eighteenth Floor	1,998.93
21	Nineteenth Floor	1,999.89
22	Twentieth Floor	1,986.50
23	Terrace Floor	0.00
	Total Built-up Area	50,270.20 sq. m.

Floor-wise Details of Residential Units/Tenements

S. No.	Floor(s)	Details	No. of Floors	Units per Floor	Total Units / Tenements
1	First Floor	Community Hall & other Amenities	1	1	1
2	3rd, 5th, 7th, 9th, 11th, 13th, 15th, 17th & 19th Floors	9 Flats + 5 EWS Units	9	14	126
3	2nd, 4th, 6th, 8th, 10th, 12th, 14th, 16th & 18th Floors	9 Flats + 5 EWS Units	9	14	126
4	20th Floor	9 Flats + 3 EWS Units	1	12	12
	Total	264 Residential Units + 1 Community Hall	20	—	265

POPULATION DETAILS

S. No.	Category	No. of DU/Area	Standard	Population
1.	Residents (1 BHK)	93 Flats	4 persons/unit	372
2.	Residents (4 BHK)	171 Flats	7 persons/unit	1,197
3.	Total Residential Population	264 Flats	—	1,569
4.	Staff	—	@ 5% of residential population	78
5.	Visitors	—	@ 10% of residential population	157
	Total Estimated			1,804

	Population			persons
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WATER REQUIREMENT DETAILS

Category	Population/Area (sq m)/Capacity	Standard (LPCD)	Water Requirement (KLD)	Fresh Water Requirement (KLD)	Recycled Water requirement (KLD)
Domestic					
Residents	1569	100	157	110	47
Staff	78	45	4	3	1
Visitors	157	15	3	2	1
Total Domestic Water Demand			164	115	49
Landscaping/Green Area	2,118.99 sq.m.	Lump Sum	10	—	10
Fire Fighting	-	Lump Sum	5	—	5
DG cooling	-	Lump Sum	10	—	10
Total		-	189 KLD	115 KLD	74 KLD

WASTE WATER CALCULATION

Category	Total Quantity (KLD)
Total Domestic Water Demand	164
Fresh water Req.	115
Flushing water Req.	49
Sewage generation (@80% of the fresh + 100% flushing water requirement)	141
Capacity of STP	150 KLD
Recovered water from STP (90% of Waste water)	126
• Flushing	49

• Landscaping	10
• Fire Fighting	5
• DG cooling	10
• Construction in nearby areas/road washing/sewer	52

SOLID WASTE GENERATION

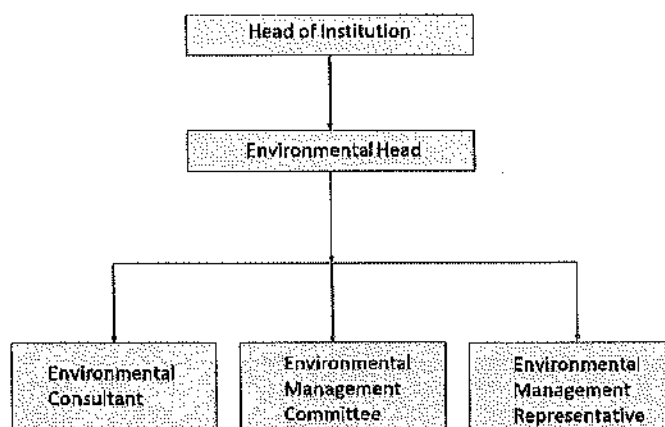
S. No	Description	Occupancy/Area	kg/capita/day	Total Solid Waste Generation (kg/day)	Recyclable (kg/day) 40% (kg/day)	Non-Recyclable 60% (kg/day)
1.	Residents	1569	0.5	784	314	470
2.	Staff	78	0.25	19	8	11
3.	Visitors	157	0.15	24	10	14
4.	Landscape waste	2,118.99 m ²	0.2 kg/acres	0.1	0.1	-
5.	STP sludge	141 KLD Sewage Generation	--	14	14	-
Total Waste Generated				827	332	495

EMP COST DURING OPERATIONS PHASE

S. No.	Activity	Capacity/ Area/Nos./parameters	Capital Cost (Lacs)	Annual Recurring Cost (Lacs)
1.	STP	150 KLD	25	6
2.	Landscaping & planting trees	2,118.99 sq.m.	5	2
3.	Solid waste Management/OWC 400 Kg/Day	827 kg/day total waste generation	23	7
4.	RWH Pit Installation	7 pits	20	7
5.	Energy Saving Solar Energy – 5%; LED Lighting – 2%; Energy-efficient HVAC – 4%; BEE Star-rated Equipment – 2%; VFD Pumps &	15%	23	2

	Motors – 1%; Energy Management & Sensors – 1%.			
6.	Environmental Monitoring	Air, water, soil and noise	-	5
Total			96	29

ORGANIZATION STRUCTURE



ENVIRONMENT MANAGEMENT

Green belt development

- Total green area proposed is 2,118.99 sq.m. (@ 22.30% of Plot Area)
- Initiation of the green belt during the construction phase itself.
- This green belt and landscape area developed around the project would cover approximately 15% (1425.33 sq.m) and 7.30% (693.66 sq.m) of the plot area, respectively.
- Approximately 114 trees are proposed within the residential campus.
- Native and pollution tolerant species shall be planted.
- Treated wastewater shall be utilized for irrigation of landscaped areas.
- Evergreen native and suitable ornamental tree species proposed for plantation include Arjun, Sishu, Mahagoni, Kadam, Royal Palm, Krishnachura, Radhachura, Amaltas, Palas, Champa, Neem, Chatim, Bakul, Ashok, Sal, Teak, Mahua, Mango and Imli.

Suggested Monitoring Program for Project

S. No.	Type	Locations	Parameters	Period and Frequency
1.	Ambient Air Quality	Project Site	Criteria Pollutants: SO ₂ , NO ₂ , PM _{2.5} & PM ₁₀	Half yearly (24 hr average samples) during construction phase and

				annual during operation phase.
2.	Groundwater (Portability testing)	Project site	Drinking water parameters as per IS 10500.	Half Yearly
3.	Ambient Noise	Project site	dB (A) levels	Half Yearly (Hourly day and night time L_{eq} levels) during construction phase and every year during operation phase.
4.	Potable water quality	Drinking water supply	As per IS 10500 potable water standards	Half Yearly
5.	Soil quality	Project site	Organic matter, C.H., N, Alkalinity, Acidity, heavy metals and trace metal, Alkalinity, Acidity.	Half Yearly
6.	Waste Characterization	Municipal waste	Physical and Chemical composition	Daily
7.	Treated water	Outlet of STP	BOD, MPN, coliform count, etc.	Monthly

Solid Waste Management

During Construction Phase

- Designated construction material storage areas shall be provided within the project site. These would be segregated as recyclable/ reusable and discarded materials.
- Excavated topsoil shall be stored separately and reused for landscaping and green belt development.
- Remaining excavated soil shall be utilized for backfilling, site levelling, and internal road development, to the extent feasible.
- Separate waste collection bins/containers shall be provided for collection and segregation of waste generated by construction workers.
- Construction and Demolition (C&D) waste shall be managed in accordance with the Construction and Demolition Waste Management Rules and applicable guidelines.

- Recyclable materials such as steel scrap, cement bags, cardboard, plastic, oil and packaging materials shall be collected separately and handed over to authorized recyclers.
- Adequate housekeeping practices shall be maintained throughout the construction period.

During Operation Phase

- Waste shall be segregated at source into biodegradable, recyclable, sanitary, biomedical (where applicable), domestic hazardous, and other waste streams as per the applicable Solid Waste Management Rules, 2026.
- Color-coded bins shall be provided at appropriate locations throughout the campus for segregation and collection of different categories of waste.
- Horticultural waste shall be composted and reused for landscaping and green belt development.
- Recyclable waste such as paper, plastic, glass, metal, and cardboard shall be handed over to authorized recyclers.
- STP sludge generated from sewage treatment plants shall be utilized as manure for horticulture and landscaping activities, wherever feasible.
- Domestic hazardous waste shall be stored separately and disposed of through authorized agencies in accordance with applicable regulations.
- The overall solid waste management system shall ensure environmentally sound collection, segregation, storage, processing, transportation, recycling, and disposal of waste in compliance with statutory requirements.

Water Quality Management

During Construction Phase

- Water requirement will be met through water tankers.
- Mobile toilets shall be provided for construction workers.
- Wastewater arising from the project shall be disposed of conforming to standards of CPCB by septic tanks/ soak pits.
- Proper site drainage and housekeeping shall be maintained.

During Operation Phase

- STP of total capacity 150 KLD will be provided.
- Approximately 126 KLD treated wastewater will be reused for flushing, landscaping, HVAC cooling, DG cooling and fire-fighting.
- Dual plumbing system will be adopted.
- Rainwater harvesting pits will be provided for groundwater recharge.

Air Quality Management

- Warehouse/stock yard will be provided for storage of construction material
- Covering of trucks carrying construction materials.
- Dust suppression by water sprinkling at site and haulage road.
- Adequate maintenance of construction equipment & vehicles.
- Wheel wash facility at the entry/exit of the site to prevent dust emissions.
- Periodical Ambient Air Quality Monitoring.
- Provision of stacks with DG sets as per CPCB norms and usage of low sulphur fuel in DG sets
- Initiation of the green area development in construction stage itself
- Barricading the construction site
- Covering the scaffolding of buildings with green nets

Energy conservation

- Energy efficient lifts will be installed at the site
- Solar street lights will be provided in ratio of 1:3
- CFL/LED Lighting Fixtures for internal lighting.
- Energy Efficient Motors and Pumps.
- BEE Star Rated Electrical Equipment.
- Copper Bus Bars in Electrical Panels.
- Heat Reflective Roof and Wall Coatings.
- Approx. 5% of the energy saving is achieved through solar panels and solar-powered street lighting, while the remaining 10% is achieved through energy-efficient measures such as LED lighting, energy-efficient HVAC systems, BEE Star-rated equipment, VFD pumps and motors, and energy management systems.
- No fenestration provided on the west facing side of the building. West facing will be blocked
- All windows of all rooms open to outside so as the day light enters in all the flats
- Shafts and windows provided for adequate ventilation
- Usage of fly ash mixed cement for construction (PPC)

Undertaking

- An undertaking that no ground water will be used without any prior approval from CGWA
- E-waste shall be handed over only to authorized recyclers.
- Solid waste shall be managed as per applicable Solid Waste Management Rules 2026.
- Approx. 5% of the energy saving is achieved through solar panels and solar-powered street lighting, while the remaining 10% is achieved through energy-efficient measures such as LED lighting, energy-efficient HVAC systems, BEE Star-rated equipment, VFD pumps and motors, and energy management systems.
- The project shall comply with all applicable environmental regulations and statutory requirements.

STATUTORY CLEARANCES

1	Land Docs	:	The land has been acquired on development agreement.
2	DFO Territorial	:	DFO, Ranchi Forest Division vide letter no. 261, dated 22.01.2021 certified that the distance of reserved/protected forest is more than 250 m from project site.
3	DFO Wildlife	:	DFO, Wildlife Division, Ranchi vide memo no. 57, dated 16.01.2021 certified that proposed project site is out side Eco Sensitive Zone of Palkot Wildlife Sanctuary.
4	CO certificate	:	The CO, Badagai, Ranchi vide letter no. 57(ii) dated 27.01.2021 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in Khatiyar.
5	AAI NOC	:	Airport authority of India issued NOC vide NOC ID no. RANC/EAST/B/ 062520/467729, dated 07.07.2020 valid up to 05.07.2028.
6	Building Plan approval	:	Building plan has been approved by Ranchi Municipal Corporation vide memo no. RMC/AH/0754/W03/2024, dated 03.08.2024.
7	Fire Department	:	Fire Advisory has been issued by Fire Department, Jharkhand, Ranchi, vide letter no. 1410/Tech./2020, dated 03.07.2020.
8	Consent to Establish (CTE)	:	CTE issued by JSPCB vide Ref. No. JSPCB/HO/RNC/CTE-21342792/2025/251, dated 16.04.2025.
9	Previous Environmental Clearance (EC)	:	Previous EC granted by SEIAA, Jharkhand vide letter no. EC/SEIAA/2020-21/2316/2021/64, dated 15.07.2021.
10	Transfer of Environmental Clearance (EC)	:	Transfer of EC granted by SEIAA, Jharkhand vide letter no. 230, dated 20.06.2025.

Based on the presentation made and information provided, the Committee decided that the proposal for Expansion of Residential Group Housing Project of M/s Oceanik Buildtech and Construction Pvt. Ltd., Village : Morabadi, Tehsil : Ranchi, Distt. : Ranchi, Jharkhand is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – IV alongwith the following specific conditions :

1. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked

green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.

- II. Ground water to be drawn for use in the project only after obtaining permission from the Competent Authority.
- III. Environment management system including organization structure to be drawn to ensure compliance of EC conditions stipulated based on principles of Continual Improvement and periodical management review.
- IV. All raw material to be stored only under covered shed.
- V. PAs to offset (upto20%) consumption of conventional energy sources by promoting use of solar energy, passive energy utilization, optimum fenestration, shading effect and heat islands.
- VI. Developers to promote energy conservation measures such that it offsets not less than 02 % of connected load.
- VII. Trees should be developed & maintained not less than 15% of project area.
- VIII. Organic Waste Converter (OWC) to be installed of sufficient capacity such that all organic waste (bio degradable) generated is composted at source only.
- IX. Developers/Company to install STP of sufficient capacity such that all the sewer produced is treated and reused.
- X. Developers/Company to install Rain water harvesting structures such that all the roof top water runoff is collected and harvested including reuse on 100% basis.
- XI. Developers/Company to conduct and submit carbon footprint and carbon sequestration study report including mitigation measures as a part of EC compliance.
- XII. Water runoff originating from open non constructed areas of project premises to be harvested /guided in such a way that it does not create water logging condition outside.
- XIII. Sufficient number of EV fast charging points to be installed.
- XIV. MSW Collection centre should be located in isolated and preferably unmanned area. Movement of the vehicle carrying waste should be under tarpaulin covered condition only. Route of vehicle should be such that it avoids residential areas as far as practical.
- XV. ISO 14k EMS system standard to be followed for implementation of EMPs with MRM in place for feedback to Sr management.

4. Jamirtala & Chandipur Stone Deposit of Shri Sanjay Sinha & Abdul Aziz (Partners), Village : Jamirtala & Chandipur, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.86 Ha).

(Proposal no.: SIA/JH/MIN/ 587260 /2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 125th meeting held on 23.07.2025 - 28.07.2025 and SEIAA, Jharkhand has approved the ToRs in 125th meeting held on 19th & 20th August, 2025. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2025-26/3848/2025/389, dated 21.08.2025. The final EIA / EMP submitted by PP to SEAC on 21.08.2026.

EC Application for: Proposed Capacity- 67276 cum/year or 181644 TPA.

Project and Location Details:

SI	Parameter	Details
1	Project Name	: Jamirtala & Chandipur Stone Deposit
2	Lessee:	: Partner 1- Sri Sanjay Sinha, s/o- Sri Saranghar Sinha Address- Anisabad Fulwari, Thana- Garadnibag, District- Patna (Bihar) Partner 2- Abdul Aziz, s/o- Late Sohrab Ali, At- village + P.O. + Thana- Shikaripara, District- Dumka,
3	Lease Address	: Village – Jamirtala & Chandipur, Thana – Shikaripara, District – Dumka, State – Jharkhand
4	Lease Area	: 2.86 Ha Acres- 7.06 Acres
5	Type of Land	: Non- Forest (Raiyati Land)
6	Project Cost	: Rs. 123.618/- Lakhs
7	EMP Budget	: Capital: Rs. 31.818/- lakhs Recurring: Rs. 14.278 Lakh/year
8	New or Expansion	: New
9	Mineable Reserves	: 336337 cum Tonnes: 908111 tones
10	Mine Life	: 5 years
11	Man power	: 42
12	Water Requirement	: 7.83 ~ 8.0 KLD (Drinking: 0.42 KLD, Dust Suppression: 2.7 KLD, Plantation: 4.71 KLD)
13	Water Source	: Water will be taken from nearby village
14	DG Set / power	: 500 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: As per Co Letter nearest Water body is at 500 meter, EMP Submitted.

17	Nearest Habitation	:	As per Co Letter nearest habitation is at 500meter, EMP Submitted.
18	Nearest Rail Station	:	Pinargaria Railway station, approx. 4.50 km towards NNW direction
19	Nearest Air Port	:	Deoghar Airport, approx. 101.92 km towards WNW direction
20	Nearest Forest	:	Protected Forest, Approx. 3.29 km. in East direction of mine site. Protected Forest, Approx. 4.08 km. in NE direction of mine site.
21	Road & Highways	:	NH-114A, Approx. 2.06 km in North direction.
22	Approach road	:	Approx. 450 m
23.	DMO Cluster	:	Six another mining leases exists within 500 m radius from proposed project site and their total cluster area is 41.20acre or 16.67 ha.
24.	Nearest Forest	:	The distance of reserved / protected forest is 705meter from proposed project site as per DFO, Dumka vide letter no.: 983on 02.05.2025.
25.	Distance of nearest ESZ of wildlife sanctuary or National Park	:	The project location is at approx. 90.88 km from the nearest Eco sensitive zone of Udhwa Bird Sanctuary.

CO-ORDINATES

DETAILS OF BOUNDARY PILLARS		
Pillar No	Latitude	Longitude
P1	N24°10'37.188"	E87°40'06.820"
P2	N24°10'36.433"	E87°40'08.525"
P3	N24°10'35.636"	E87°40'10.107"
P4	N24°10'35.748"	E87°40'10.741"
P5	N24°10'35.005"	E87°40'12.148"
P6	N24°10'34.268"	E87°40'11.772"
P7	N24°10'35.225"	E87°40'09.898"
P8	N24°10'34.716"	E87°40'09.491"
P9	N24°10'35.176"	E87°40'08.763"
P10	N24°10'34.522"	E87°40'07.660"
P11	N24°10'34.144"	E87°40'06.090"
P12	N24°10'33.766"	E87°40'06.171"
P13	N24°10'32.546"	E87°40'04.565"

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P14	N24°10'31.472"	E87°40'03.901"
P15	N24°10'30.930"	E87°40'03.208"
P16	N24°10'32.505"	E87°40'02.842"
P17	N24°10'33.284"	E87°40'00.714"
P18	N24°10'32.792"	E87°40'00.257"
P19	N24°10'32.835"	E87°40'00.087"
P20	N24°10'33.290"	E87°40'00.336"
P21	N24°10'33.430"	E87°40'00.141"
P22	N24°10'33.296"	E87°39'59.728"
P23	N24°10'33.943"	E87°39'59.675"
P24	N24°10'33.933"	E87°39'58.571"
P25	N24°10'34.055"	E87°39'58.486"
P26	N24°10'33.951"	E87°39'58.349"
P27	N24°10'34.124"	E87°39'57.740"
P28	N24°10'34.289"	E87°39'57.825"
P29	N24°10'34.267"	E87°39'57.935"
P30	N24°10'35.011"	E87°39'58.514"
P31	N24°10'34.612"	E87°39'58.418"
P32	N24°10'34.572"	E87°40'00.061"
P33	N24°10'35.107"	E87°40'00.403"
P34	N24°10'35.366"	E87°40'00.299"
P35	N24°10'35.336"	E87°39'59.407"
P36	N24°10'36.126"	E87°39'59.442"
P37	N24°10'36.514"	E87°39'59.204"
P38	N24°10'36.740"	E87°39'59.223"
P39	N24°10'37.168"	E87°39'59.582"
P40	N24°10'37.245"	E87°40'00.447"

P41	N24°10'36.228"	E87°40'01.233"
P42	N24°10'35.717"	E87°40'02.171"
P43	N24°10'36.026"	E87°40'02.904"
P44	N24°10'36.181"	E87°40'04.674"
P45	N24°10'36.477"	E87°40'04.845"
P46	N24°10'36.095"	E87°40'05.243"
P47	N24°10'36.013"	E87°40'06.442"

LAND DETAILS

Khata no.	Plot no.
12, 14 & 7	Jamirtala Plot No.- 32, 33, 34, 35, 36, 37, 40, 42, 44, 45, 47, 48, 49, 50, 51, 52, 53 & 54
	Chandipur Plot No. 1, 2, 3, 4, 5, 6, 7, 10, 11, 19, 103.

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Dumka vide letter no. 739/M, dated 26.05.2025.
2	CO	:	The CO, Shikaripara vide letter no. 437/Ra., dated 15.05.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyan & Register II.
3	DMO Cluster	:	DMO, Dumka vide memo no. 779/M, dated 02.06.2025 certified that 06 other mining lease area (4.57 Acre, 5.42 Acre, 6.51 Acre, 5.19 Acre, 7.37 Acre & 5.08 Acre) exists within 500 m radius from proposed project site and total area is 41.20 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 812, dated 15.05.2025 and letter no. 925, dated 28.05.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Dumka Forest Division vide letter no. 983 dated 02.05.2025 and letter no. 1133, dated 22.05.2025 certified that the distance of reserved / protected forest is at 770 meters and 705 meters from proposed project site.

6	DSR	:	The DMO, Dumka has certified vide memo no. 839/M, dated 21.06.2025 that this project is mentioned in approved DSR of Dumka District as a potential area (Page no. 182).
7	Gram Sabha	:	Gram Sabha conducted on 27.03.2025.
8	Mine Plan Approval	:	Approved by DMO, Dumka vide Letter No. 853/M, dated 24.06.2025.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/87/2026/3182, dated : 19.08.2026.
10	Baseline monitoring period	:	October, 2025 to December, 2025.
11	Public Hearing	:	Public Hearing conducted on 11.06.2026.
12	Qualified Person	:	Shri P.K. Sen was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Mechanized Method
2	Quarry Area	:	1.95 ha Life of Mine – 5 Years
3	Waste Generation	:	Total 17701cum intercalated waste & 16587 cum Gritty soil during the plan period.
4	Stripping Ratio	:	1: 0.019
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	60 AMSL to 68 AMSL
8	Ground Level Elevation	:	60 AMSL
9	Ultimate Working Depth	:	Up to 24 AMSL (36 mbgl)
10	Water Table	:	18-6 AMSL (42-54 mbgl)
11	Topography of Mine	:	The applied lease area represent gently sloping land
12	Explosive Requirement	:	110 kg/day
13	Diesel/Fuel requirement	:	110 litre/day

Production Details

Year	Production of stone		Intercalated waste	Removal of gritty soil	
	in cum	in cum	in cum	in cum	in tonnes
1st Year	67235	181533	3539	15075	22613
2nd Year	67263	181610	3540	1512	2268
3rd Year	67276	181644	3541	000	000
4th Year	67263	181610	3540	000	000
5th Year	67276	181644	3541	000	000
Total	336313	908041	17701	16587	24881

Land Use

Land Utilization	Existing Land use (Ha.)	At the end of plan period (Ha)	At Conceptual period(Ha)	Conceptual period (in ha.)		
				Public use	Water body	plantation
Quarry	0.154 (including water logged)	1.95 (Including backfilling 0.37 ha.)	1.95 (Including backfilling 0.37 ha.)	-	1.00	0.95 (Dead Bench plantation)
Safety Zone	Nil	0.91 (Plantation)	0.91 (Plantation)	-	-	0.91
Road	0.074	Nil	Nil	-	-	-
Total Area In Used	0.228	2.86	2.86	-	1.00	1
Balanced Area Unused	2.632	Nil	Nil	-	-	-
Total Applied Area	2.86					

ENVIRONMENT MANAGEMENT
Green Belt Development

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development,

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.91	1456	1600 Tree per Hectare	1st Year	Pipal, Gulmohar Jackfruits, Mango, Jamun, Babul, Neem, Arjun, etc.
Length of Approach Road Area (m.)	450	900	2m X 2 m spacing in two rows both side		
Plantation at Dead Bench	0.95	1520	1600 Tree per Hectare	At the end of plan period	
Total		3876			

Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Summary of Baseline Data:

Monitoring season – October 2025 to December 2025

Parameter	No. of Locations	Environmental Baseline Study
Ambient Air Quality Monitoring	8 locations	PM2.5- 20.85 µg/m ³ to 47.57µg/m ³ PM10- 62.33 µg/m ³ – 87.81 µg/m ³ SO ₂ - 6.09 µg/m ³ - 12.83 µg/m ³ NO ₂ - 10.39 µg/m ³ – 19.99µg/m ³
Noise level monitoring	8 locations	During daytime- 52.1 to 57.8 dB (A) During Night time- 40.2 to 45.8 dB (A) Results were found within permissible limits
Water samples	Surface water – 2 locations	All parameters like pH (7.16 to 7.68), Chloride (28.92 - 34.50 mg/l), Dissolved Oxygen (6.80 - 7.12mg/l), BOD (2.9 to 3.5mg/l) etc. are found within permissible limits. Water will be used for Drinking water/Domestic purpose source after conventional treatment/tertiary treatment and disinfection. (Class of water –C, As per CPCB Guideline)
	Ground water- 5locations	All parameters like pH (7.24 to 7.71), Hardness (457.0- 508.0mg/l), TDS (275-560mg/l), etc. are found within permissible limits & fit for consumption.

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Soil Samples	5 locations	pH- 7.25 -7.50 Conductivity- 372.00 – 451.00 µmhos/cm
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Public Hearing (Action Plan) –

S. No.	Issue	Reply	Action Plan	Time Bound
1	There is a problem of drinking water	deep boring would be done	Installation of a hand pump with deep boring; Rs. 2.50 lakh capital cost and Rs. 0.50 lakh recurring cost.	This will be done within 6 months to 1 year after the grant of EC.
2	Transport roads should be repaired regularly	assured that the transport road would be regularly repaired and maintained	Total cost of Rs. 2.25lakh as a capital cost and Rs. 1.50 Lakh of Recurring cost will be spend for road repair which is also included in EMP	This will be done within 6 months to 1 year after the grant of EC
3	Platform (chabutara) should be constructed near the football ground	platform will be constructed near the football ground	Rs. 1.0lakh as a capital cost will spend to construct platform (chabutara) near football ground which has also been included in EMP Cost	This will be done within 2 to 3 year after the grant of EC
4	football ground should be leveled, and a set of jerseys should be provided	The football ground will be leveled and a set of jerseys will be provided.	Rs. 1.0lakh capital cost will be spend for leveling football ground and Rs. 0.50 lakh will be spend on distribution of set of jersey	This will be done within 2nd year after the grant of EC
5	A Manjhithan should be constructed.	Manjhithan will be constructed	Rs. 1.50lakh as a capital cost will be spend to construct Manjhithan which has also been included in EMP Cost	This will be done within 2nd year after the grant of EC
6	Employment	priority will be given to (raiylats) and local villagers in employment according to their qualifications and	-	Will be hired as soon as mine start till closer

		necessity		
7	Dense plantation	Dense plantation will be undertaken in and around the project area.	capital cost of Rs. 6.636 lakh and recurring cost of 1.106lakh will be spend	This will be done within 2nd year after the grant of EC.
8	Regular water sprinkling should be done on the transportation route	Regular water sprinkling will be carried out on the transportation route for pollution control.	Budget of Rs. 1.106Lakh as a recurring cost will be spent for water sprinkling, cost included in EMP.	Will be hired as soon as mine start till closer
9.	Vehicles should not be overloaded	Vehicles will not be overloaded.	-	-
Total			Capital Cost – 14.88Lakh Recurring Cost- 3.606	

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Particulars			Capital	Recurring
Land			70,60,000.00	7,06,000.00
Infrastructure			15,00,000.00	1,50,000.00
Mining Equipment			0.00	59,00,000.00
<i>Equipment</i>	<i>Quantity</i>	<i>Rent per year</i>		
<i>Wagon drill</i>	2	6,00,000		
<i>Hydraulic Excavator</i>	3	7,80,000		
<i>Compressor</i>	2	7,20,000		
<i>Jackhammer</i>	2	4,00,000		
<i>Tippers</i>	4	20,00,000		
<i>Rock breaker</i>	2	8,00,000		
<i>Water tanker</i>	2	6,00,000		
@ Per Hydraulic Excavator: ₹2,60,000/- @ Per Wagon drill: ₹3,00,000/- @Compressor: ₹3,60,000/- @Jackhammer: ₹2,00,000 /- @Tippers: ₹5,00,000/- @Rock breaker: ₹4,00,000/-				

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@Water tanker: ₹3,00,000/-		
Water Facility for Domestic Purpose "0.42" KLD (Annual Water Demand "126"KL @4L per Tanker, total number of tanker required ("32") and per tanker cost @Rs. 500)	0.00	16,000.00
Statutory Clearances	5,00,000.00	0.00
Mine Closure Cost for fencing around mine	1,20,000.00	0.00
Environment Management Plan (EMP) Cost	31,81,800.00	14,27,800.00
Total	1,23,61,800.00	81,99,800.00

COST PROPOSED FOR EMP

Particulars	Capital	Recurring
3876 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	11,62,800.00	1,93,800.00
Water Tanker @Rs. 500 per Tanker for Dust Suppression (2.7 KLD) & Horticulture (4.71 KLD) 2.7+ 4.71 = 7.41KLD 7.41 KLD X 300 Days = 2223 KLD 2223 KLD / 4 KLD = 555.75~ or say 556 Tankers	0	2,78,000.00
Environment Monitoring & Compliance.	0	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	11,44,000.00	2,86,000.00
Garland Drain & Retaining wall	1,50,000.00	50,000.00
Suggestion as per public Hearing		
Budget for Fencing with barbed wire and concrete pillars.	1,50,000.00	50,000.00
Budget for Construction and maintenance of haul road	2,25,000.00	1,50,000.00
Installation of a hand pump with deep boring	2,50,000.00	50,000.00
Budget for Financial Assistance	0	1,00,000.00
Budget for sports jerseys & Leveling of the football ground	1,00,000.00	20,000.00
Budget for villagers at the time of Happiness and sorrow	0	1,00,000.00
Budget for club house construction.	0	1,00,000.00
Total	31,81,800.00	14,27,800.00

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering	3 Stations	Six Monthly

	project site only.		
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

SE Need based Survey detail

S. No.	Community Priority	Status	Need of the Community	Yearly Budget, Rs. In lacks
1.	Education	Moderate	School building construction and stationary distribution	1.00
2.	Medical Facilities	Very Poor	Health Camp for routine check-up, and medicine distribution	2.00
3.	Drinking Water	Average	Hand Pump and Bore wells required	2.00
4.	Social Issues	Un-employment	Un-employment is the major issue	*
TOTAL				5.00

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- Total 17701cum intercalated waste & 16587 cum Gritty soil will be generated during the plan period. The area is covered with a layer of gritty soil. During quarry development in 1st & 2nd year gritty soil and intercalated waste will be removed and this soil & waste will be temporarily dumped within the quarry & 2nd year gritty soil and intercalated waste will be removed and this soil, waste & existing temporary dumped materials will be temporarily dumped within the quarry & 3rd year intercalated waste will be removed and this waste & existing temporarily dumped materials will be temporarily dumped within the quarry & 4th year intercalated waste will be removed and this waste & existing temporarily dumped materials will be temporarily dumped within the quarry & 5th year intercalated waste will be removed and this waste & existing temporary dumped materials will be backfill within the exhausted quarry.
Air Quality	Wet drilling and use of sharp drill bits to minimize dust generation.

Management	• Controlled blasting using optimum explosive charge during favourable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring &	• Periodic monitoring of air, water (ground & surface), noise, and soil

Reporting:	quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate

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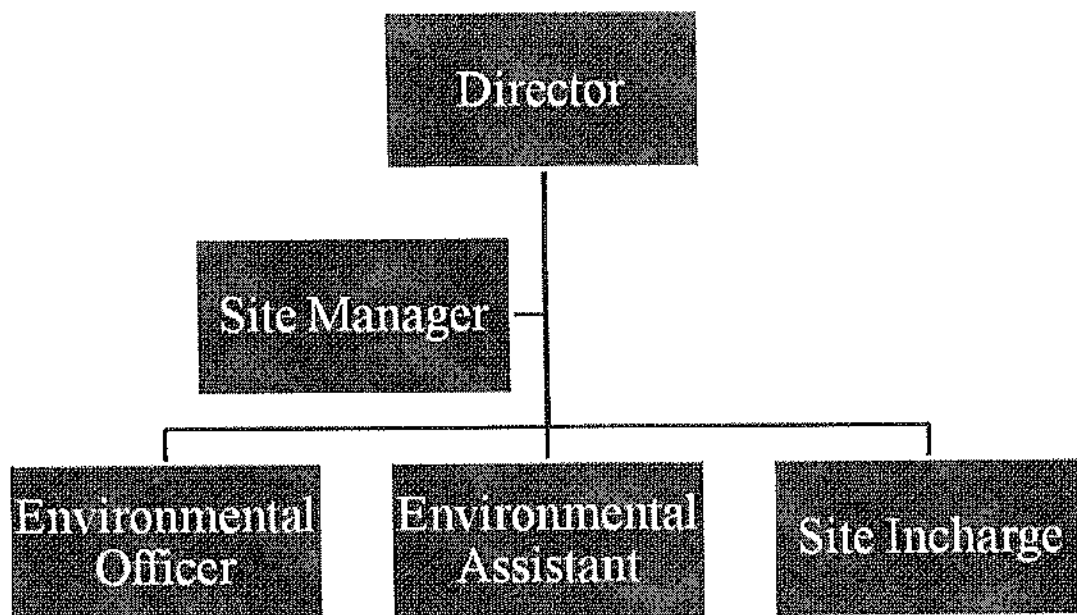
	precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:









EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.

- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Jamirtala & Chandipur Stone Deposit of Shri Sanjay Sinha & Abdul Aziz (Partners), Village : Jamirtala & Chandipur, Thana : Shikaripara, Distt. : Dumka, Jharkhand (2.86 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/87/2026/3182, dated : 19.08.2026 is also included as Annexure – I (E) :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- III. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- IV. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- V. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VI. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.

VIII. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

5. Marro Stone Deposit of Shri Ajit Kumar Singh, Village : Marro, Thana : Govindpur, Thana no. : 136, Distt. : Dhanbad, Jharkhand (1.214 Ha).

(Proposal no.: SIA/JH/MIN/575107/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 122nd meeting held on 24.03.2025 - 28.03.2025 and SEIAA, Jharkhand has approved the ToRs in 122nd meeting held on 08th & 09th April, 2025. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2024-25/3646/2024/70, dated 16.04.2025. The final EIA / EMP submitted by PP to SEAC on 23.07.2026.

EC Application for: Proposed Capacity- 8631.0 cum/annum or 23303.7TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Marro Stone Block
2	Lessee:	: Shri Ajit kumar Singh
3	Lease Address	: Village – Marro, Thana- Govindpur District – Dhanbad, State- Jharkhand
4	Lease Area	: 1.214 Ha Acres- 2.99 Acres
5	Type of Land	: Non- Forest (Raiyati Land)
6	Project Cost	: Rs. 62.20 Lakhs
7	EMP Budget	: Capital: Rs. 11.10 lakhs Recurring: Rs. 5.41 Lakh / year
8	New or Expansion	: New
9	Mineable Reserves	: cum.: 100959.99 cum Tonnes: 272591.97tons
10	Mine Life	: 10 years
11	Man power	: 20
12	Water Requirement	: 2.61~3.0 KLD (Drinking: 0.20 KLD, Dust Suppression: 0.70 KLD,

			Plantation: 1.69 KLD)
13	Water Source	:	Water will be taken from nearby village
14	DG Set / power	:	200 KVA
15	Crusher	:	No crusher
16	Nearest Water Body	:	Khudai Nadi, approx. 170 m in South direction as per Google earth EMP Submitted.
17	Nearest Habitation	:	Approx. 390m, in ESE direction as per Google earth EMP Submitted.
18	Nearest Rail Station	:	Dhanbad Railway station, approx. 10.4 km towards SW direction
19	Nearest Air Port	:	Deoghar Airport, approx. 67.24 km towards North direction.
20	Road & Highways	:	SH - 13, Approx. 3.3 km in East direction. NH - 19, Approx. 2.5 km in South direction. NH- 419, Approx. 4.0 km in SE direction.
21	Approach Road	:	approx, 120 meter
22	DMO Cluster	:	Five another mining lease area exists within 500 m radius from proposed project site and their total cluster area is 29.68acre.
23	Nearest Forest	:	The distance of reserved / protected forest is more than 250m i.e. approx 514 meter from proposed project site as per Divisional Forest Officer, Dhanbad, vide letter no.:2919, dated 30.09.2023
24	Distance of nearest ESZ of wildlife sanctuary or National Park	:	The project location is at approx. 16.59 km from the nearest Eco sensitive zone of Topchanchi Wildlife Sanctuary.

CO-ORDINATES

PILLAR ID	LATITUDE	LONGITUDE
P1	23°51'57.66599"	86°29'26.48400"
P2	23°51'57.80599"	86°29'27.89912"
P3	23°51'57.96320"	86°29'29.48831"
P4	23°51'58.14176"	86°29'31.29317"
P5	23°51'58.29768"	86°29'32.86943"
P6	23°51'58.41900"	86°29'34.09570"
P7	23°51'57.49456"	86°29'34.08155"
P8	23°51'56.64330"	86°29'34.06852"
P9	23°51'56.48782"	86°29'32.82097"
P10	23°51'56.30929"	86°29'31.38846"
P11	23°51'56.10064"	86°29'29.71439"

P12	23°51'55.90757"	86°29'28.16563"
P13	23°51'55.73002"	86°29'26.74100"
P14	23°51'56.67055"	86°29'26.61616"

LAND DETAILS

Khata no.	Plot no.
20	386 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Director of Mines, Deptt. of Mines & Geology, Govt. of Jharkhand vide letter no. 1881, dated 01.09.2022.
2	CO	:	The CO, Govindpur, Dhanbad vide letter no. 228, dated 25.02.2025 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyani & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 390 meters and River exists within 100 meter from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Dhanbad vide memo no. 61/M, dated 21.01.2025 certified that 03 other mining lease area (3.20 Acre, 3.15 Acre & 11.85 Acre) and 02 LoI (2.991 Acre & 3.5 Acre) exists within 500 meters radius from proposed project site and total area is 29.68 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 2572, dated 19.10.2023 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Dhanbad Forest Division vide letter no. 2918, dated 30.09.2023 certified that the distance of reserved / protected forest is 514 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Dhanbad District (Sl. No. 01, Page no. 67).
7	Gram Sabha	:	Gram Sabha conducted on 04.09.2023.
8	Mine Plan Approval	:	Approved by District Mining Officer, Dhanbad vide Memo No. 382/M, dated 12.03.2025.
9	Environmental	:	Environmental Safeguard issued by Environmental Engineer –

	Safeguard from Jharkhand State Pollution Control Board (JSPCB)	cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/44/2026/2325, dated : 22.07.2026.
10	Baseline monitoring period	: March, 2025 to May, 2025.
11	Public Hearing	: Public Hearing conducted on 20.01.2026.
12	Qualified Person	: Dr. Amarjeet Kumar Singh was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast mechanized method	
2	Quarry Area	:	0.83ha	Life of Mine – 9.7 or 10 Years
3	Waste Generation	:	1953.75 cum	
4	Stripping Ratio	:	1: 0.016	
5	Working Days	:	300	
6	Bench: size & No	:	6m to 6m	
7	Elevation of Mine	:	242 AMSL to 262 AMSL	
8	Ground Level Elevation	:	242 AMSL	
9	Ultimate Working Depth	:	Up to 218 AMSL (24 mgbl)	
10	Water Table	:	180-182 AMSL (60-62 mbgl)	
11	Topography of Mine	:	The area represents a small hillock.	
12	Explosive Requirement	:	34 kg/day	
13	Diesel/Fuel requirement	:	120 litre/day	

Production Details

Year	Production of Stone		waste (cum)	Bench AMSL
	(cum)	(tons)		
1 st	8550.00	23085.00	150.00	259-248
2 nd	8564.25	23123.475	450.75	254-242
3 rd	8631.00	23303.70	450.75	248-242

4 th	8589.00	23190.30	452.00	242-236
5 th	8556.00	23101.20	450.25	252-236
Total	42890.25	115803.675	1,953.75	

Land Use

Type of land use	Existing Land Use (Ha)	At the end of Plan period (Ha)	Conceptual Period(Ha) (after life of mine)
Quarry	0.75	0.75	0.83
Infrastructure	Nil	0.03	Nil
Garland Drain	Nil	0.04	Nil
Green Belt	0.38	0.38	0.38
Settling Tank	Nil	0.01	Nil
Total	1.13	1.21	1.21
Unused Area	0.084	-	-
Total lease Area	1.214		

ENVIRONMENT MANAGEMENT

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.38	608	1600 Tree per Hectare	1st Year	Pipal, Gulmohar Jackfruits, Mango, Jamun, Babul, Neem, Arjun, etc.
Length of Approach Road Area (m.)	120	240	2m X 2 m spacing in two rows both side		
		848			

Note – 10 % of Total plant i.e.85 plants will be planted as EK Ped Maa K Naam.

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same

to be maintained and will be submitted with compliance report.

Summary of Baseline Data:

Monitoring season – March 2025 to May 2025

Parameter	No. of Locations	Environmental Baseline Study
Ambient Air Quality Monitoring	8 locations	PM2.5- 23.66 µg/m ³ (AQ8) – 48.38 µg/m ³ (AQ7) PM10- 51.28 µg/m ³ (AQ 5) – 85.43 µg/m ³ (AQ1) SO ₂ - 4.82 µg/m ³ (AQ7) - 12.75 µg/m ³ (AQ2) NO ₂ - 8.15µg/m ³ (AQ5) – 20.86µg/m ³ (AQ1)
Noise level monitoring	8 locations	During daytime- 51.7 to 58.7 dB (A) During Night time- 38.5 to 43.1 dB (A) Results were found within permissible limits
Water samples	Surface water – 2 locations	All parameters like pH (7.26 to 7.74), Chloride (48.2- 48.92 mg/l) Dissolved Oxygen (6.8 to 7.2 mg/l), TDS (190.8 to 280mg/l), BOD (4.6 to 6.2mg/l), COD (23.4 to 36.0mg/l) etc. are found within permissible limits. Water will be used for Drinking water/Domestic purpose source after conventional treatment/tertiary treatment and disinfection. (Class of water –C, As per CPCB Guideline)
	Ground water- 5locations	All parameters like pH (7.24 to 7.78), Total Hardness (251- 280 mg/l), TDS (480– 622 mg/l), Chlorides (48.4 -56.8mg/l), etc. are found within permissible limits & fit for consumption.
Soil Samples	5 locations	pH- 7.25 – 7.84 Conductivity- 402 – 484.2 µmhos/cm

Public Hearing (Action Plan) –

S. No.	Issue	Reply	Action Plan	Time Bound
1.	Employment	Preference will be given to local people for employment based on eligibility and necessity	Direct and Indirect employment will be given to 40 Skilled & Un-Skilled persons Un-Skilled on priority basis.	To be hired as mine start till closer.
2.	Water should be sprinkled on nearby roads	Water will be sprinkled twice a day by tankers in the mine area and on Haul roads.	Total Rs. 3.06 lakh will be spent as recurring cost for Pollution Control & Dust Suppression. Water sprinkling will be done twice a day.	This will be done after mining will start.

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3.	Faulty hand pumps Borewell repaired.	Faulty hand pumps have been repaired and will continue to be repaired	Budget of Rs. 1.0lakh as a capital cost will be spend for repairing hand pumps	This will be done within 6 months to 1 year after the grant of EC.
4.	Tree plantation should be done	Trees will be planted in the mines area and Nearby villages.	Rs 6.07 lakh as the Capital Cost and every year Rs. 1.01 lakh every year will be spent as recurring cost	This will be done within 6 months to 1 year after the grant of EC.
5.	Cooperation is expected for weddings and Shradh ceremonies	We have always supported social causes and will continue to do so as much as possible	Budget of Rs. 0.50lakh as a recurring cost will be spend for weddings and Shradh ceremonies same has been incorporated in EMP.	This will be done within 6 months to 1 year after the grant of EC
6.	Sports competitions should be organized	Sports competition should be organized in Mandro Panchayat, the management will cooperate as much as possible.	Budget of Rs. 0.50Lakh as recurring cost will be spend every year for organizing sports competition.	This will be done within 6 months to 1 year after the grant of EC.
7.	Blankets should be distributed	Blanket will be distributed.	Budget of Rs. 0.50lakh as a recurring cost will be spend for blanket distribution has been incorporated in EMP.	This will be done within 6 months to 1 year after the grant of EC.
Total			Capital cost : Rs. 6.07Lakh Recurring cost: Rs. 5.57Lakh	

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Particulars			Capital	Recurring
Land			29,90,000.00	29,90,000.00
Infrastructure			15,00,000.00	1,50,000.00
Mining Equipment			0.00	46,00,000.00
Equipment	Quantity	Rent per year		
Excavator	2	8,00,000		
Rock Breakers	2	4,00,000		
Compressor/ wagon drill	2	20,00,000		
Dumper	4	8,00,000		
Water sprinkles	1	6,00,000		
@Per Excavator-4,00,000/-				
@Per Rock Breaker-2,00,000/-				
@Per Compressor-10,00,000/-				
@Per Water Sprinkler -6,00,000/-				
@Per Loader-3,00,000/-				

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@Per Dumper-2,00,000/-		
Water Facility for Domestic Purpose "0.20" KLD (Annual Water Demand "60"KL @4L per Tanker, total number of tanker required ("15") and per tanker cost @Rs. 500)	0.00	75,000.00
Statutory Clearances	5,00,000.00	0.00
Mine Closure Cost for fencing around mine	1,20,000.00	0.00
Environment Management Plan (EMP) Cost	11,10,000.00	5,41,800.00
Total	62,20,000.00	56,65,800.00

COST PROPOSED FOR EMP

Particulars	Capital	Recurring
848 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	2,54,400.00	42,400.00
Water Tanker @Rs. 500 per Tanker for Dust Suppression (0.92 KLD) & Horticulture (1.69 KLD) 0.92+ 1.69 = 2.61 KLD 2.61 KLD X 300 Days = 783 KLD 783KLD / 4 KLD = 195.75~ or say 196 Tankers	0	98,000.00
Environment Monitoring & Compliance	0	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	4,85,600.00	1,21,400.00
Garland Drain & Retaining wall	1,20,000.00	80,000.00
Suggestion as per public Hearing		
Budget for rainwater harvesting	1,50,000.00	0
Budget for weddings and Shradh ceremonies	0	50000.00
Budget for organizing sports competition	0	50000.00
Budget for blanket distribution	0	50000.00
Budget for repairing hand pumps	1,00,000.00	0
Total	11,10,000.00	5,41,800.00

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the	2 Surface water	Six Monthly

	Project area.	2 Ground water	
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

SE Need based Survey detail

S. No.	Community Priority	Status	Need of the Community	Capital Cost	Recurring Cost
1.	Health	Very Poor	Health Camp for routine check-up, and medicine distribution	1.5	1
2.	Drinking Water & Infrastructure	Moderate Level	Repairing of Faulty pumps/ bore well and installation of deep boring	2.0	0.5
3.	Employment	Poor	Employment is the major issue, and will be provided on the basis of capability and experience of local people		
TOTAL				3.50	1.5

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- Total 1953.75 cum waste shall be generated during the plan period. Plan period & conceptual period is same. - Some of the waste shall be utilized for maintenance the village road and making the approach road, haul road and some part of the waste shall be collecting with a settling tank for controlling surface run off.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favourable weather conditions. Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	- Mining will be confined only above the Ground Water Table (GWT). Rainwater accumulated in the pit will be collected and pumped out

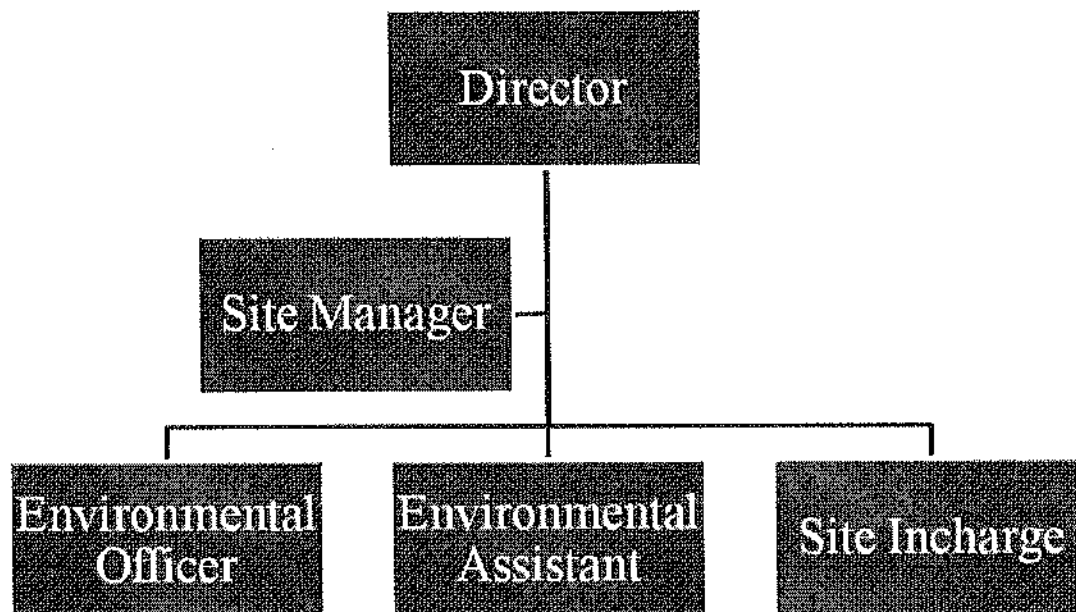
	regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank–soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from

	standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide

	publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required).

	▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.

- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Marro Stone Deposit of Shri Ajit Kumar Singh, Village : Marro, Thana : Govindpur, Thana no. : 136, Distt. : Dhanbad, Jharkhand (1.214 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/44/2026/2325, dated : 22.07.2026 is also included as Annexure – I (F) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby River due to the mining activities.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged

photographs.

- VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

6. Marro Stone Deposit of Shri Ajit Kumar Singh, Village : Marro, Thana : Govindpur, Distt. : Dhanbad, Jharkhand (2.02 Ha).

(Proposal no.: SIA/JH/MIN/575271/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Environmental Clearance (EC) after Terms of Reference.

The State Expert Appraisal Committee, Jharkhand deliberated the project during its 122nd meeting held on 24.03.2025 - 28.03.2025 and SEIAA, Jharkhand has approved the ToRs in 122nd meeting held on 08th & 09th April, 2025. TOR for the project was issued by SEIAA, Jharkhand vide letter no. EC/SEIAA/2024-25/3638/2024/11, dated 15.04.2025. The final EIA / EMP submitted by PP to SEAC on 23.07.2026.

EC Application for: Proposed Capacity- 8799.00 cum/annum or 23757.30 TPA

Project and Location Details :

Sl	Parameter	Details
1	Project Name	: Marro Stone Block
2	Lessee:	: Shri Ajit kumar Singh

3	Lease Address	:	Village – Marro, Thana- Govindpur District – Dhanbad, State- Jharkhand
4	Lease Area	:	2.02 Ha Acres- 4.991 Acres
5	Type of Land	:	Non- Forest (Rajyati Land)
6	Project Cost	:	Rs. 89.408 Lakhs
7	EMP Budget	:	Capital: Rs. 15.308 lakhs Recurring: Rs. 6.988 Lakh / year
8	New or Expansion	:	New
9	Mineable Reserves	:	cum.: 108138.74 cum Tonnes: 291974.59 tons
10	Mine Life	:	10 years
11	Man power	:	20
12	Water Requirement	:	5.54~6.0 KLD (Drinking: 0.20 KLD, Dust Suppression: 0.64 KLD, Plantation: 4.70 KLD)
13	Water Source	:	Water will be taken from nearby village
14	DG Set / power	:	500 KVA
15	Crusher	:	No crusher
16	Nearest Water Body	:	Khudai Nadi, approx. 60m in South direction as per Google earth EMP Submitted.
17	Nearest Habitation	:	Approx. 340 m, in East direction as per Google earth EMP Submitted
18	Nearest Rail Station	:	Dhanbad Railway station, approx. 10.2 km towards SW direction
19	Nearest Air Port	:	Dhanbad Airport, approx. 7.5 km towards SW direction.
20	Road & Highways	:	SH - 13, Approx. 3.1 km in East direction. NH - 19, Approx. 2.3 km in South direction. NH- 419, Approx 3.4 km in SE direction.
21	Approach Road	:	approx, 180 meter
22	DMO Cluster	:	Five another mining lease area exists within 500 m radius from proposed project site and their total cluster area is 29.68acre.
23	Nearest Forest	:	The distance of reserved / protected forest is approx 514 meter from proposed project site as per Divisional Forest Officer, Dhanbad, vide letter no.:2918, dated 30.09.2023
24	Distance of nearest ESZ of wildlife sanctuary or National Park	:	The project location is at approx. 16.78 km from the nearest Eco sensitive zone of Topchanchi Wildlife Sanctuary.

CO-ORDINATES

PILLAR ID	LATITUDE	LONGITUDE
P1	23°51'55.87286"	86°29'28.83670"
P2	23°51'55.98328"	86°29'29.97949"
P3	23°51'56.23438"	86°29'31.90196"
P4	23°51'56.51838"	86°29'33.94000"

P5	23°51'56.75911"	86°29'36.28752"
P6	23°51'56.73282"	86°29'38.66899"
P7	23°51'56.34385"	86°29'37.83980"
P8	23°51'55.56308"	86°29'37.03974"
P9	23°51'54.75154"	86°29'36.17664"
P10	23°51'54.09770"	86°29'36.17916"
P11	23°51'53.20307"	86°29'36.21073"
P12	23°51'53.12272"	86°29'35.32232"
P13	23°51'52.84361"	86°29'34.16341"
P14	23°51'52.27124"	86°29'32.78116"
P15	23°51'53.72593"	86°29'32.67024"
P16	23°51'54.05054"	86°29'30.92525"
P17	23°51'54.30719"	86°29'29.44244"
P18	23°51'54.53809"	86°29'28.45554"
P19	23°51'55.22684"	86°29'28.60487"

LAND DETAILS

Khata no.	Plot no.
20	386 (P)

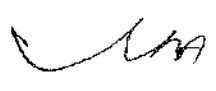
STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Director of Mines, Deptt. of Mines & Geology, Govt. of Jharkhand vide letter no. 1882, dated 01.09.2022.
2	CO	:	The CO, Govindpur, Dhanbad vide letter no. 227, dated 25.02.2025 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyani & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 340 meters and River exists at a distance of 160 meter from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Dhanbad vide memo no. 62/M, dated 21.01.2025 certified that 03 other mining lease area (3.20 Acre, 3.15 Acre & 11.85 Acre) and 02 LoI (4.991 Acre & 3.5 Acre) exists within 500 meters

			radius from proposed project site and total area is 29.68 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 2571, dated 19.10.2023 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Dhanbad Forest Division vide letter no. 2919, dated 30.09.2023 certified that the distance of reserved / protected forest is 514 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Dhanbad District (Sl. No. 02, Page no. 67).
7	Gram Sabha	:	Gram Sabha conducted on 04.09.2023.
8	Mine Plan Approval	:	Approved by District Mining Officer, Dhanbad vide Memo No. 381/M, dated 12.03.2025.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/45/2026/2326, dated : 22.07.2026.
10	Baseline monitoring period	:	March, 2025 to May, 2025.
11	Public Hearing	:	Public Hearing conducted on 20.01.2026.
12	Qualified Person	:	Dr. Amarjeet Kumar Singh was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast mechanized method	
2	Quarry Area	:	1.51	Life of Mine –10 Years
3	Waste Generation	:	Total 2267.56 cumwaste shall be generated during the plan period	
4	Stripping Ratio	:	1: 0.2	
5	Working Days	:	300	
6	Bench: size & No	:	6m to 6m	
7	Elevation of Mine	:	200 AMSL to 226 AMSL	
8	Ground Level Elevation	:	200 AMSL	







9	Ultimate Working Depth	:	Up to 196 AMSL (4 mgbl)
10	Water Table	:	180-182 AMSL (18-20 mbgl)
11	Topography of Mine	:	The area represents a small hillock.
12	Explosive Requirement	:	34 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of Stone		waste (cum)	Bench AMSL
	(cum)	(tons)		
1st	8223.20	22202.64	432.00	225-214
2nd	8768.50	23674.95	461.50	220-208
3rd	8799.00	23757.30	461.11	214-202
4th	8550.00	23085.00	450.00	208-202
5th	8796.00	23749.20	462.95	208-196
Total	43136.7	116469.09	2267.56	

Land Use

Type of land use	Existing Land Use (Ha)	At the end of Plan period (Ha)	Conceptual Period(Ha) (after life of mine)
Quarry	0.51	0.64	1.51 (Entire area shall be left as water reservoir)
Infrastructure	Nil	0.03	Nil
Mine Road	0.03	0.01	Nil
Garland Drain	Nil	0.06	Nil
Safety Zone	0.51 (Plantation)	0.51 (Plantation)	0.51 (Plantation)
Settling Tank	Nil	0.01	Nil
Total	1.05	1.26	2.02
Balance	0.97	0.76	-

ENVIRONMENT MANAGEMENT**Green Belt Development**

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.51	816	1600 Tree per Hectare	1st Year	Pipal, Gulmohar Jackfruits, Mango, Jamun, Babul, Neem, Arjun, etc.
Length of Approach Road Area (m.)	180	360	2m X 2 m spacing in two rows both side		
		1176			

Note – 10 % of Total plant i.e.118 plants will be planted as EK Ped Maa K Naam.

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Summary of Baseline Data:

Monitoring season – March 2025 to May 2025

Parameter	No. of Locations	Environmental Baseline Study
Ambient Air Quality Monitoring	8 locations	PM2.5- 23.66 µg/m ³ (AQ8) – 48.38 µg/m ³ (AQ7) PM10- 51.28 µg/m ³ (AQ 5) – 85.43 µg/m ³ (AQ1) SO ₂ - 4.82 µg/m ³ (AQ7) - 12.75 µg/m ³ (AQ2) NO ₂ - 8.15µg/m ³ (AQ5) – 20.86µg/m ³ (AQ1)
Noise level monitoring	8 locations	During daytime- 51.7 to 58.7 dB (A) During Night time- 38.5 to 43.1 dB (A) Results were found within permissible limits
Water samples	Surface water – 2 locations	All parameters like pH (7.26 to 7.74), Chloride (48.2- 48.92 mg/l) Dissolved Oxygen (6.8 to 7.2 mg/l), TDS (190.8 to 280mg/l), BOD (4.6 to 6.2mg/l), COD (23.4 to 36.0mg/l) etc. are found within permissible limits. Water will be used for Drinking water/Domestic purpose source after conventional treatment/tertiary treatment and disinfection.

		(Class of water –C, As per CPCB Guideline)
	Ground water- 5 locations	All parameters like pH (7.24 to 7.78), Total Hardness (251- 280 mg/l), TDS (480– 622 mg/l), Chlorides (48.4 -56.8mg/l), etc. are found within permissible limits & fit for consumption.
Soil Samples	5 locations	pH- 7.25 – 7.84 Conductivity- 402 – 484.2 µmhos/cm

Public Hearing (Action Plan) –

S. No.	Issue	Reply	Action Plan	Time Bound
1.	Employment	Preference will be given to local people for employment based on eligibility and necessity	Direct and Indirect employment will be given to 40 Skilled & Un-Skilled persons Un-Skilled on priority basis.	To be hired within 3 months.
2.	Water should be sprinkled on nearby roads	Water will be sprinkled twice a day by tankers in the mine area and on Haul roads.	Total Rs. 3.06 lakh will be spent as recurring cost for Pollution Control & Dust Suppression. Water sprinkling will be done twice a day.	This will be done after mining will start.
3.	Faulty hand pumps Borewell repaired.	Faulty hand pumps have been repaired and will continue to be repaired	Budget of Rs. 1.0lakh as a capital cost will be spend for repairing hand pumps	This will be done within 6 months to 1 year after the grant of EC.
4.	Tree plantation should be done	Trees will be planted in the mines area and Nearby villages.	Rs 6.07 lakh as the Capital Cost and every year Rs. 1.01 lakh every year will be spent as recurring cost	This will be done within 6 months to 1 year after the grant of EC.
5.	Cooperation is expected for weddings and Shradh ceremonies	We have always supported social causes and will continue to do so as much as possible	Budget of Rs. 0.50lakh as a recurring cost will be spend for weddings and Shradh ceremonies same has been incorporated in EMP.	This will be done within 6 months to 1 year after the grant of EC
6.	Sports competitions should be	Sports competition should be organized in Mandro	Budget of Rs. 0.50Lakh as recurring cost will be spend every year for organizing	This will be done within 6 months to 1 year after

	organized	Panchayat, the management will cooperate as much as possible.	sports competition.	the grant of EC.
7.	Blankets should be distributed	Blanket will be distributed.	Budget of Rs. 0.50lakh as a recurring cost will be spend for blanket distribution has been incorporated in EMP.	This will be done within 6 months to 1 year after the grant of EC.
Total			Capital cost : Rs. 6.07Lakh Recurring cost: Rs. 5.57Lakh	

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Particulars			Capital	Recurring
Land			49,90,000.00	4,99,000.00
Infrastructure			18,00,000.00	1,80,000.00
Mining Equipment			0.00	28,00,000.00
Equipment	Quantity	Rent per year		
Excavator	1	400000		
Rock Breakers	1	200000		
Compressor/ wagon drill	1	1000000		
Dumper	3	600000		
Water sprinkles	1	600000		
@Per Excavator-4,00,000/- @Per Rock Breaker-2,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Loader-3,00,000/- @Per Dumper-2,00,000/-				
Water Facility for Domestic Purpose "0.20" KLD (Annual Water Demand "60"KL @4L per Tanker, total number of tanker required ("15") and per tanker cost @Rs. 500)			0.00	75,000.00
Statutory Clearances			5,00,000.00	0.00
Mine Closure Cost for fencing around mine			1,20,000.00	0.00
Environment Management Plan (EMP) Cost			15,30,800.00	6,98,800.00
Total			89,40,800.00	42,52,800.00

COST PROPOSED FOR EMP

Particulars	Capital	Recurring
1176 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	3,52,800.00	58,800.00
Water Tanker @Rs. 500 per Tanker for Dust Suppression (0.84 KLD) & Horticulture (4.70 KLD) $0.84 + 4.70 = 5.54$ KLD $5.54 \text{ KLD} \times 300 \text{ Days} = 1662 \text{ KLD}$ $1662 \text{ KLD} / 4 \text{ KLD} = 415.5 \sim$ or say 530 Tankers	0	2,08,000.00
Environment Monitoring & Compliance	0	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	8,08,000.00	2,02,000.00
Garland Drain & Retaining wall	1,20,000.00	30,000.00
Suggestion as per public Hearing		
Budget for rainwater harvesting	1,50,000.00	0
Budget for weddings and Shradh ceremonies	0	50000.00
Budget for organizing sports competition	0	50000.00
Budget for blanket distribution	0	50000.00
Budget for repairing hand pumps	1,00,000.00	0
Total	15,30,800.00	6,98,800.00

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

SE Need based Survey detail

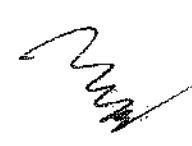
S. No.	Community Priority	Status	Need of the Community	Capital Cost	Recurring Cost
1.	Health	Very Poor	Health Camp for routine check-up, and medicine distribution	1.5	1
2.	Drinking Water & Infrastructure	Moderate Level	Repairing of Faulty pumps/ bore well a and installation of deep boring	2.0	0.5
3.	Employment	Poor	Employment is the major issue, and will be provided on the basis of capability and experience of local people		
TOTAL				3.50	1.5

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	Total 2267.56 cum waste shall be generated during the plan period. Plan period & conceptual period is same. Some of the waste shall be utilized for maintenance the village road and making the approach road, haul road and some part of the waste shall be collecting with a settling tank for controlling surface run off.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favourable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG





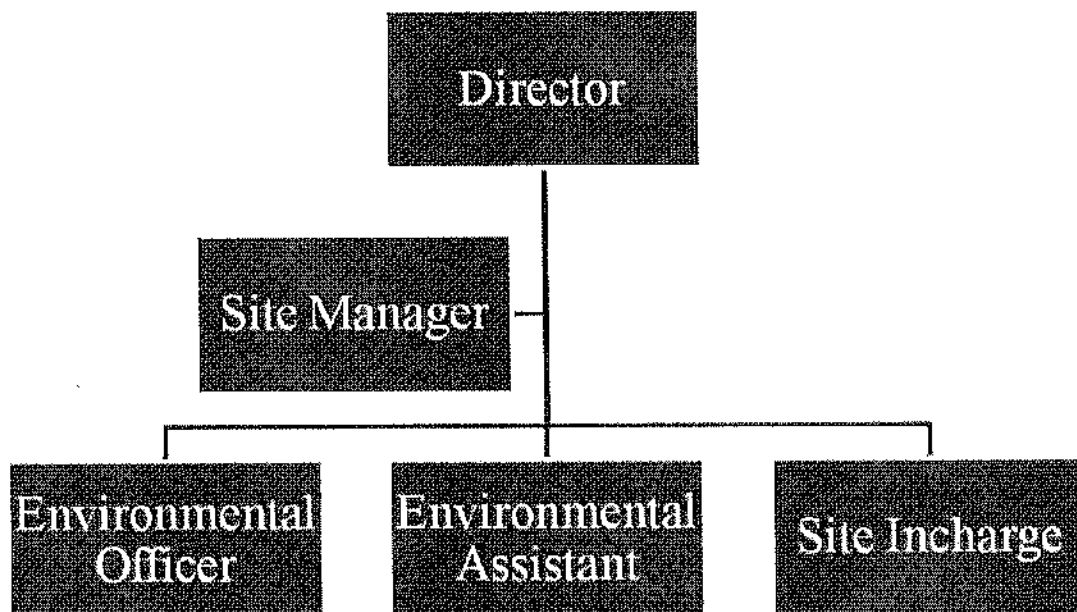


	set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to

	always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidl etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept.

	The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

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Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Marro Stone Deposit of Shri Ajit Kumar Singh, Village : Marro, Thana : Govindpur, Distt. : Dhanbad, Jharkhand (2.02 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/45/2026/2326, dated : 22.07.2026 is also included as Annexure – I (G) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby River due to the mining activities
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked

green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.

- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
 - V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
 - VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
 - VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
 - VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
 - IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

7. Tintidih Stone Deposit of M/s Triveni Engicons (Director : Shri Anand Dodrajka), Village : Tintidih, Anchal : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.340 Ha).

(Proposal no.: SIA/JH/MIN/587083/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 32338 cum/annum or 87313 TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Tintidih Stone Deposit
2	Lessee	: M/s Triveni Engicons Pvt. Ltd. Director- Sri Anand Dodrajka
3	Lessee Address	: At 3/6H.S. Tower, L. Road, P.O. + P.S. - Bistupur, District- East Singhbhum, Jharkhand.
4	Lease Area	: 2.340 Ha. 5.784Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 88.586/- Lakh
7	EMP Budget	: Capital: Rs. 9.246/-Lakh Recurring: Rs. 7.081 /- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 802994 tones 297405 Cum
10	Mine Life	: 9.2 or say 10 years
11	Man power	: 16
12	Water Requirement	: 12.93~13.0 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: 50 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: Seasonal Nallah, approx 400 meter as per KML, EMP submitted.
17	Nearest Habitation	: Nearest Habitation 1.0km towards SSE direction as per Google Earth.
18	Nearest Rail Station	: Haludpukur Railway Station, approx. 11.09 km towards SE direction
19	Nearest Air Port	: Birsa Munda Airport, Ranchi approx. 104.18 km towards NW direction.
20	Road & Highways	: NH – 220, Approx. 3.04 km towards South direction.
21	Approach Road	: approx, 207 meters
22	Cluster Certificate	: No other mine exists within 500m radius.
23	Nearest Forest	: The distance of reserved / protected forest is more than 1.0 Km from the proposed project site as per the Divisional Forest Officer, Seraikela Forest Division, vide letter no.: 822/Seraikela, dated 27/05/2026.
24	Distance of nearest ESZ of Wildlife Sanctuary	: The project location is at approx. 28.42km from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.

	or National Park	
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CO-ORDINATES

Pillar ID	Latitude	Longitude
1	22° 39' 38.060" N	86° 3' 27.845" E
2	22° 39' 40.081" N	86° 3' 21.549" E
3	22° 39' 39.507" N	86° 3' 21.489" E
4	22° 39' 39.362" N	86° 3' 20.624" E
5	22° 39' 39.884" N	86° 3' 20.144" E
6	22° 39' 44.424" N	86° 3' 20.273" E
7	22° 39' 44.030" N	86° 3' 23.202" E
8	22° 39' 44.947" N	86° 3' 23.733" E
9	22° 39' 44.339" N	86° 3' 25.189" E
10	22° 39' 46.386" N	86° 3' 26.166" E
11	22° 39' 46.060" N	86° 3' 27.091" E
12	22° 39' 43.037" N	86° 3' 25.601" E
13	22° 39' 43.833" N	86° 3' 24.050" E
14	22° 39' 42.531" N	86° 3' 23.759" E
15	22° 39' 40.878" N	86° 3' 22.894" E
16	22° 39' 40.030" N	86° 3' 24.693" E
17	22° 39' 40.981" N	86° 3' 25.369" E
18	22° 39' 40.578" N	86° 3' 26.543" E
19	22° 39' 40.158" N	86° 3' 27.751" E
20	22° 39' 38.728" N	86° 3' 27.374" E
21	22° 39' 41.243" N	86° 3' 21.008" E
22	22° 39' 40.996" N	86° 3' 21.424" E
23	22° 39' 41.370" N	86° 3' 21.823" E
24	22° 39' 41.572" N	86° 3' 21.466" E
25	22° 39' 41.625" N	86° 3' 20.782" E
26	22° 39' 41.391" N	86° 3' 20.675" E
27	22° 39' 41.124" N	86° 3' 20.758" E

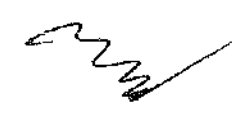
LAND DETAILS

Khata no.	Plot no.
3 & 132	148 (P), 152, 154 (P), 155 (P), 156 (P), 158 (P), 159 & 160 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Saraikela-Kharsawan vide letter no. 416/M, dated 15.04.2026.
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2	CO	:	The CO, Rajnagar vide letter no. 316, dated 26.03.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyan & Register II. During the appraisal it was seen from the KML that Seasonal Nala exists at a distance of 400 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Saraikela-Kharsawan vide letter no. 898/M, dated 15.07.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 724, dated 07.05.2026 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Saraikela Forest Division, Saraikela vide letter no. 822, dated 27.05.2026 certified that the distance of notified forest is 01 KM from proposed project site.
6	DSR	:	The DMO, Saraikela-Kharsawan has certified vide memo no. 783/M, dated 23.06.2026 that this project is mentioned in approved DSR of Saraikela-Kharsawan District as a potential area (Page no. 13, Sl. no. 742).
7	Gram Sabha	:	BDO, Rajnagar vide letter no. 1346, dated 08.10.2025 informed that Gram Sabha conducted on 06.10.2025.
8	Mine Plan Approval	:	Approved by DMO, Saraikela-Kharsawan vide Letter No. 734/Mining, dated 13.06.2026.
9	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Semi- Mechanized Method
2	Quarry Area	:	1.398 Ha
3	Waste Generation	:	33870 cum
4	Stripping Ratio	:	1:0.082
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	195 m AMSL to 188 m AMSL
8	Ground Level Elevation	:	188 m AMSL
9	Ultimate Working	:	150 m AMSL (38 mbgl)

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	Depth		
10	Water Table	:	130 -127 m AMSL (58-61 mbgl)
11	Topography of Mine	:	Area represents undulating hillock
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of stone		Overburden cum	Intercalated waste in cum	Total Waste in cum
	Cum	MT			
1 st Year	28401.00	76683.00	25900.00	1495	27395
2 nd Year	29526.00	79720.00	0.00	1554	1554
3 rd Year	30088.00	81239.00	0.00	1584	1584
4 th Year	31073.00	83896.00	0.00	1635	1635
5 th Year	32338.00	87313.00	0.00	1702	1702
Total	151426.00	408851.00	25900.00	7970	33870

Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Quarry	Nil	0.828	1.398 (0.255 ha area shall be backfilled, 0.986 ha converted into water reservoir, 0.157 ha shall be left as dead bench)
Waste Dump	Nil	0.204	Nil
Road	Nil	0.021	Nil
Safety zone & Road Barrier Plantation	Nil	0.942	0.942
Total	0.00	1.995	2.340
Unused Area	2.340	0.345	0.0
Total Lease Area	2.340		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.942	1508	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	207	414	2m X 2 m spacing in two rows both side		

Plantation at Backfilling	0.255	408	1600 Tree per Hectare	At the End of Plan Period	
Plantation at Dead Bench	0.157	252			
Total		2582			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars			Capital	Recurring
Land			57,84,000.00	5,78,400.00
Infrastructure			15,00,000.00	1,50,000.00
Mining Equipment			0.00	43,00,000.00
Equipment	Quantity	Rent per year		
Wagon drill	1	4,00,000		
Excavator	1	4,00,000		
Compressor	1	10,00,000		
Water Sprinkler	1	6,00,000		
Dumper	2	4,00,000		
DG Set	1	15,00,000		
@Per wagon drill- 4,00,000/- @Per Excavator-4,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Dumper-2,00,000/- @Per Loader-3,00,000/- @DG set -15,00,000/-				
Water Facility for Domestic Purpose "0.16" KLD (Annual Water Demand "48"KL @4L per person , total number of tanker required ("12") and per tanker cost @Rs. 500)			0.00	6,000.00
Statutory Clearances.			5,00,000.00	0.00
Mine Closure Cost for fencing around mine.			1,50,000.00	0.00
Environment Management Plan (EMP) Cost			9,24,600.00	7,08,100.00
Total			88,58,600.00	57,42,500.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

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Particulars	Capital	Recurring
2582 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	7,74,600.00	1,29,100.00
Water Tanker @Rs. 500 per Tanker for Dust Suppression (1.24 KLD) & Horticulture (11.53 KLD) 1.24 + 11.53 = 12.77 KLD 12.77 KLD X 300 Days = 3831 KLD 3831KLD / 4 KLD = 958 Tankers	0.00	4,79,000.00
Environment Monitoring & Compliance	0.00	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	0.00	0.00
Garland Drain & Retaining wall.	1,50,000.00	50,000.00
Total	9,24,600.00	7,87,500

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

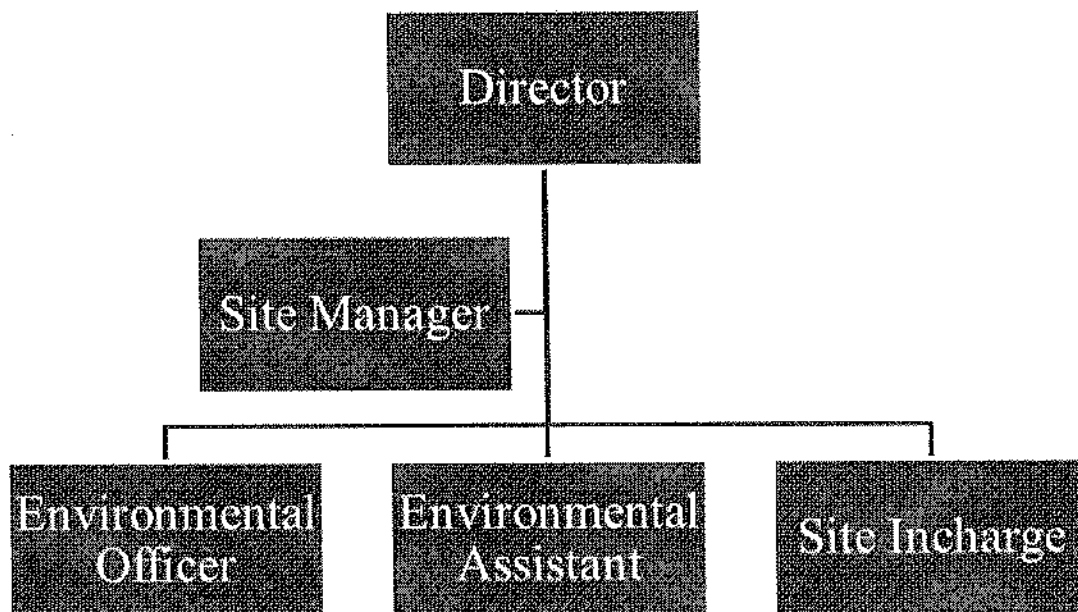
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- In this applied lease area, the stone deposit is covered with 2m layer of gritty intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. - It has been calculated that total 33870 cum in-situ waste shall be generated during this plan period, out of which 21125 cum (In situ) shall be utilized for approach & haul road maintenance. - The rest waste material 12745 cum in situ 15471.36 cum loose & 13150.66 cum compact waste shall be temporary dumped on the south

	eastern part of the applied lease area and it will cover about 0.204 ha area. • While excavation of insitu waste, its volume shall be increase, as it becomes loose (insitu cum X 1.25), during the dumping/backfilling these loose materials shall be compacted with the use of dozer and volume will be decreased up to 85% of loose waste. • Garland drain shall be provided along the OB dump. This drain would collect surface run off from dump body. Water collected in this drain would be stored in a sedimentation tank, the treated water shall be released for natural runoff.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone).

		• Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:		• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	&	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard		Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	& of	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the

	vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.

- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Tintidih Stone Deposit of M/s Triveni Engicons (Director : Shri Anand Dodrajka), Village : Tintiadh, Anchal : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.340 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- II. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- III. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- IV. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- V. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- VI. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.

- VII. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VIII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- IX. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- X. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- XI. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

8. Tintidih Stone Deposit of M/s Ravindra Mining Pvt. Ltd. (Director : Shri Romus Anal), Village : Tintidih, Anchal : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.95 Ha).

(Proposal no.: SIA/JH/MIN/582222/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 100320.00 cum/annum or 270864.00TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Tintidih Stone Deposit
2	Lessee	: M/S Ravindra Mining Pvt. Ltd Director- Sri Romus Anal
3	Lessee Address	: Gandhi School Road, Jhumri Talaiya District- Koderma, Jharkhand.
4	Lease Area	: 2.95 Ha. 7.29 Acres
5	Type of Land	: Non-Forest Raiyati Land

6	Project Cost	:	Rs. 106.598 Lakh
7	EMP Budget	:	Capital: Rs. 12.198/-Lakh Recurring: Rs 7.793 /- Lakh per year
8	New or Expansion	:	New
9	Mineable Reserves	:	1357114.5 tones 502635 Cum
10	Mine Life	:	5 years
11	Man power	:	28
12	Water Requirement	:	13.63~ 14.0KLD
13	Water Source	:	By authorised hired water tankers
14	DG Set / power	:	50 KVA
15	Crusher	:	No crusher
16	Nearest Water Body	:	Seasonal Nallah is within 500 meter as per CO, but as per Google Earth nallah is flowing adjacent (approx. 20meter) from mine site, EMP Submitted.
17	Nearest Habitation	:	Nearest Habitation 710 meter towards NNW direction as per Google Earth.
18	Nearest Rail Station	:	Haludpukur Railway Station, approx. 11.28 km towards SE direction.
19	Nearest Air Port	:	Birsa Munda Airport, Ranchi approx. 101.00 km towards NW direction.
20	Road & Highways	:	NH – 220, Approx. 6.63 km towards South direction.
21	Approach Road	:	approx, 314 meters
22	Cluster Certificate	:	No other mine exists within 500m radius.
23	Nearest Forest	:	The distance of reserved / protected forest is 2.0 Km from the proposed project site as per the Divisional Forest Officer, Seraikela Forest Division, vide letter no.: 1164/Seraikela, dated 24/07/2026.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 28.55 Km from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.

CO-ORDINATES

Pillar ID	Latitude	Longitude
1	22°39'52.598"	86°3'40.452"
2	22°39'53.683"	86°3'38.557"
3	22°39'53.887"	86°3'36.468"
4	22°39'56.505"	86°3'38.293"
5	22°39'56.845"	86°3'37.496"
6	22°40'0.180"	86°3'39.165"

[Handwritten signatures and marks]

7	22°40'0.494"	86°3'40.088"
8	22°40'1.360"	86°3'39.359"
9	22°40'4.698"	86°3'40.983"
10	22°40'6.361"	86°3'40.967"
11	22°40'6.010"	86°3'42.081"
12	22°40'3.230"	86°3'43.799"
13	22°40'1.577"	86°3'42.997"
14	22°40'0.060"	86°3'43.384"
15	22°39'59.119"	86°3'41.883"
16	22°39'56.232"	86°3'40.543"
17	22°39'56.491"	86°3'39.559"
18	22°39'55.344"	86°3'39.206"
19	22°39'54.939"	86°3'40.356"

LAND DETAILS

J.B. No. / Khata no.	Plot no.
110, 66, 113, 110, 37, 104, 109, & 97	6, 7, 10, 12, 13, 26, 3, 4, 96, 11, 9, 8, 5, 6, 97, 14, 15, 27, 28, 24, 31, 25 & 2

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Saraikela-Kharsawan vide letter no. 417/M, dated 15.04.2026.
2	CO	:	The CO, Rajnagar vide letter no. 705, dated 02.07.2025 and letter no. 543, dated 28.07.2026 have mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyani & Register II and also mentioned that the Nala within 500 meter of proposed project site, accordingly PAs has submitted EMP for the same.
3	DMO Cluster	:	DMO, Saraikela-Kharsawan vide letter no. 844/M, dated 07.07.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 1110, dated 05.07.2026 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Saraikela Forest Division, Saraikela vide letter no. 1164, dated 24.07.2026 certified that the distance of

		notified forest is 02 KM from proposed project site.
6	DSR	: The DMO, Saraikela-Kharsawan has certified vide memo no. 805/M, dated 24.06.2026 that this project is mentioned in approved DSR of Saraikela-Kharsawan District as a potential area (Page no. 13, Sl. no. 742).
7	Gram Sabha	: BDO, Rajnagar vide letter no. 129, dated 12.02.2026 informed that Gram Sabha conducted on 20.05.2025.
8	Mine Plan Approval	: Approved by DMO, Saraikela-Kharsawan vide Letter No. 720/Mining, dated 11.06.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	: Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/86/2026/3190, dated : 20.08.2026.
10	Qualified Person	: Dr. Gurbinder Singh Jaiswal was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	: Opencast Semi- Mechanized Method
2	Quarry Area	: 2.143 Ha
3	Waste Generation	: 40720 cum
4	Stripping Ratio	: 1:0.030
5	Working Days	: 300
6	Bench: size & No	: 6m to 6m
7	Elevation of Mine	: 187m AMSL to 179m AMSL
8	Ground Level Elevation	: 179 m AMSL
9	Ultimate Working Depth	: 145m AMSL (34mbgl)
10	Water Table	: 131 -1411 m AMSL (38-48 mbgl)
11	Topography of Mine	: Area represents undulating small hillock
12	Explosive Requirement	: 50 kg/day
13	Diesel/Fuel requirement	: 150 litre/day

Production Details

Year	Total Excavation	Production of stone		O/B waste in cum	Total waste in cum	Stripping ratio t/m ³
		Cum	MT			

1 st Year	114125.00	100125.00	270337.50	14000.00	14000.00	1:0.05
2 nd Year	100000.00	100000.00	270000.00	0.00	0.00	1:0.00
3 rd Year	100000.00	100000.00	270000.00	0.00	0.00	1:0.00
4 th Year	107280.00	100320.00	270864.00	6960.00	6960.00	1:0.02
5 th Year	119870.00	1000110.00	270297.00	19760.00	19760.00	1:0.07
Total	541275.00	500555.00	1351498.50	40720.00	40720.00	-

Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Quarry	Nil	2.143	2.143 (0.288 backfilling, 1.11 water reservoir, 0.745 dead bench)
Road	Nil	0.31 (Including in mining)	0.31 (Including in mining)
Waste Dump	Nil	Nil	Nil
Crusher	Nil	Nil	Nil
Safety zone	Nil	0.803 (Plantation)	0.803 (Plantation)
Total		2.95	

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.803	1285	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	314	628	2m X 2 m spacing in two rows both side		
Plantation at backfilling	0.288	461	1600 Tree per Hectare	At the End of the plan period	
Plantation at dead bench	0.745	1192	1600 Tree per Hectare		
Total		3566			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be

undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars			Capital	Recurring
Land			7290000.00	729000.00
Infrastructure			1500000.00	150000.00
Mining Equipment			0.00	4600000.00
Equipment	Quantity	Rent per year		
Wagon drill	1	400000		
Excavator	1	400000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Dumper	2	400000		
Loader	1	300000		
DG Set	1	1500000		
@Per wagon drill- 4,00,000/-				
@Per Excavator-4,00,000/-				
@Per Compressor-10,00,000/-				
@Per Water Sprinkler -6,00,000/-				
@Per Dumper-2,00,000/-				
@Per Loader-3,00,000/-				
@DG set -15,00,000/-				
Water Facility for Domestic Purpose "0.28" KLD (Annual Water Demand "84"KL @4L per person , total number of tanker required ("21") and per tanker cost @Rs. 500)			0.00	10500.00
Statutory Clearances.			500000.00	0.00
Mine Closure Cost for fencing around mine.			150000.00	0.00
Environment Management Plan (EMP) Cost			1219800.00	779300.00
Total			10659800.00	6268800.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
3566 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance.	10,69,800	1,78,300
Water Tanker @Rs. 500 per Tanker for Dust Suppression	0	5,01,000

(1.88 KLD) & Horticulture (11.47 KLD) $1.88 + 11.47 = 13.35\text{KLD}$ $13.35\text{ KLD} \times 300\text{ Days} = 4005\text{ KLD}$ $4005\text{ KLD} / 4\text{ KLD} = 1002\text{ Tankers.}$		
Environment Monitoring & Compliance.	0	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC.	0	0
Garland Drain & Retaining wall.	1,50,000	50,000
Total	12,19,800	7,79,300

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- There will be generation of waste is 40720.00 cum during this plan period. It is proposed that waste to be generated during first year will be temporary dumped i.e. 14000.00 cum towards southern side of applied area. - During 2nd & 3rd year generation of the waste is nil whereas first three year excavation and on ward 4th year part of quarry will exhausted and gradually backfilling shall be done till 5th year. There is 0.288 Ha area proposal of reclamation of pit period.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. Regular maintenance of diesel equipment and vehicles to reduce emissions.

	• Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality

	as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours.

	▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

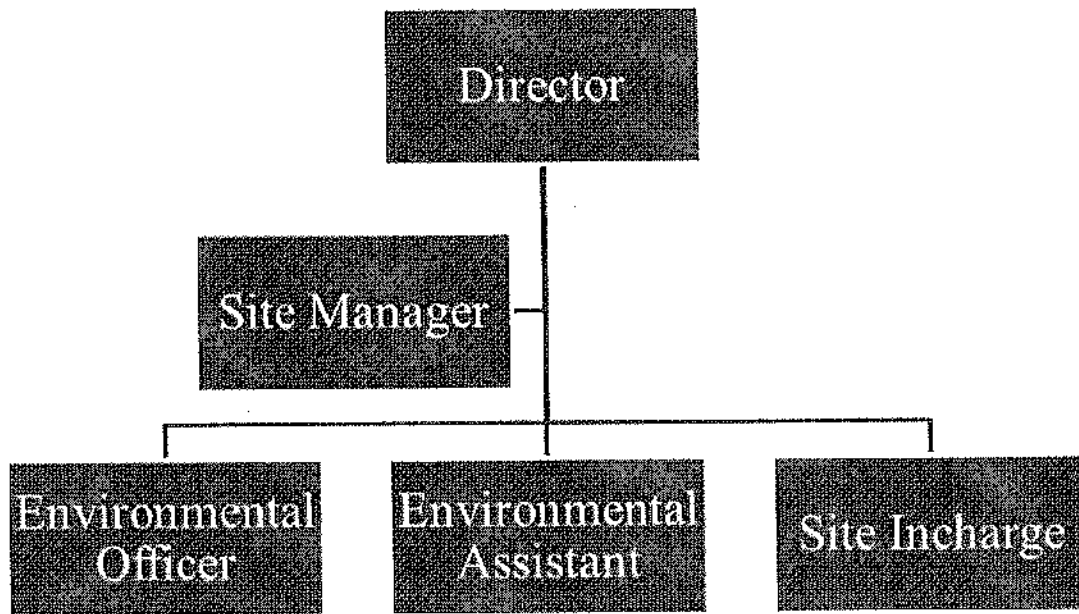
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Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.

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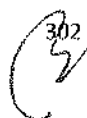
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- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Tintidih Stone Deposit of M/s Ravindra Mining Pvt. Ltd. (Director : Shri Romus Anal), Village : Tintidih, Anchal : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.95 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/86/2026/3190, dated : 20.08.2026 is also included as Annexure – I (H) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

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- VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

9. Sosomuli Stone Mine of M/s Leading Construction (Prop. : Shri Jai Prakash Singh), Village : Sosomuli, P.S. : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.16 Ha).

(Proposal no.: SIA/JH/MIN/583807/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity –37346.40 cum/annum or 104569.92TPA

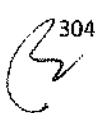
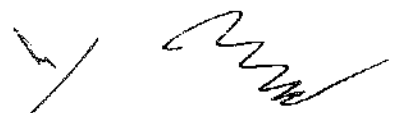
Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Sosomuli Stone Deposit
2	Lessee	: M/s Leading Construction Proprietor: Sri Jai Prakash Singh
3	Lessee Address	: Purulia Highway Jamshedpur, District –East Singhbhum, Jharkhand.
4	Lease Area	: 2.16 Ha. 5.33 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 89.29 Lakh

7	EMP Budget	:	Capital: Rs. 14.49/-Lakh	Recurring: Rs 7.665 /- Lakh per year
8	New or Expansion	:	New	
9	Mineable Reserves	:	519673.56 tones	185597.7 Cum
10	Mine Life	:	5 years	
11	Man power	:	18	
12	Water Requirement	:	9.87~ 10.0KLD	
13	Water Source	:	By authorised hired water tankers	
14	DG Set / power	:	50 KVA	
15	Crusher	:	No crusher	
16	Nearest Water Body	:	Seasonal Nallah is at the distance of 73 meter in North direction from mine site, As per Google Earth EMP Submitted.	
17	Nearest Habitation	:	Nearest Habitation 436 meter towards North direction, As per Google Earth EMP Submitted.	
18	Nearest Rail Station	:	Haludpukur Railway Station, approx. 10.11 km towards SSE direction	
19	Nearest Air Port	:	Birsā Munda Airport, Ranchi approx. 106.64 km towards NW direction.	
20	Road & Highways	:	SH-6, approx. 6.81 km towards SE direction. NH – 220, Approx. 6.37 km towards SSW direction.	
21	Approach Road	:	approx, 165 meters	
22	Cluster Certificate	:	Cluster certificate has been issued by DMO, Saraikela- Kharswan vide letter no. 762/M, Dated 19.06.2026, certified that no mine lease exists within 500m radius.	
23	Nearest Forest	:	The distance of reserved / protected forest is more than 1.0Km from the proposed project site as per the Divisional Forest Officer, Saraikela Forest Division, vide letter no.: 1263/ Saraikela dated 05.08.2026.	
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 23.75 Km from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.	

CO-ORDINATES

Pillar ID	Latitude	Longitude
1	22° 41' 15.495" N	86° 6' 57.337" E
2	22° 41' 16.750" N	86° 6' 58.110" E
3	22° 41' 20.264" N	86° 6' 59.283" E
4	22° 41' 20.735" N	86° 6' 57.664" E
5	22° 41' 21.297" N	86° 6' 57.805" E
6	22° 41' 20.797" N	86° 6' 59.816" E
7	22° 41' 22.714" N	86° 7' 0.262" E

8	22° 41' 23.060" N	86° 6' 59.506" E
9	22° 41' 22.496" N	86° 6' 57.287" E
10	22° 41' 22.151" N	86° 6' 56.477" E
11	22° 41' 22.776" N	86° 6' 56.119" E
12	22° 41' 22.130" N	86° 6' 55.794" E
13	22° 41' 22.282" N	86° 6' 55.342" E
14	22° 41' 19.052" N	86° 6' 54.175" E
15	22° 41' 19.147" N	86° 6' 55.405" E
16	22° 41' 20.126" N	86° 6' 55.575" E
17	22° 41' 20.048" N	86° 6' 56.240" E
18	22° 41' 19.358" N	86° 6' 56.172" E
19	22° 41' 19.383" N	86° 6' 55.647" E
20	22° 41' 17.872" N	86° 6' 55.782" E
21	22° 41' 17.332" N	86° 6' 56.337" E
22	22° 41' 16.734" N	86° 6' 55.895" E

LAND DETAILS

Khata no.	Plot no.
76	29 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Saraikela-Kharsawan vide letter no. 484/M, dated 24.04.2026.
2	CO	:	The CO, Rajnagar vide letter no. 35, dated 14.01.2020 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in Khatian. During the appraisal it was seen from the KML that few houses exists at a distance of 436 meters and Nala exists at a distance of 73 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Saraikela-Kharsawan vide letter no. 762/M, dated 19.06.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 772, dated 20.08.2020 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.

5	DFO Territorial	:	Divisional Forest Officer, Saraikela Forest Division, Saraikela vide letter no. 1263, dated 05.08.2026 certified that the distance of notified forest is 01 KM from proposed project site.
6	DSR	:	The DMO, Saraikela-Kharsawan has certified vide memo no. 782/M, dated 23.06.2026 that this project is mentioned in approved DSR of Saraikela-Kharsawan District as a potential area (Page no. 105, Sl. no. 36).
7	Gram Sabha	:	Gram Sabha conducted on 30.09.2018.
8	Mine Plan Approval	:	Approved by DMO, Saraikela-Kharsawan vide Letter No. 757/Mining, dated 18.06.2026.
9	Qualified Person	:	Shri Sahadev Singh was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Mechanized Method
2	Quarry Area	:	1.46 Ha
3	Waste Generation	:	16049.80 cum
4	Stripping Ratio	:	1:0.030
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	172m AMSL to 170 m AMSL
8	Ground Level Elevation	:	170m AMSL
9	Ultimate Working Depth	:	136m AMSL (34mbgl)
10	Water Table	:	124- 132 m AMSL (38-42 mbgl)
11	Topography of Mine	:	Area represents small gently sloping
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of stone		Overburden cum	Intercalated waste in cum	Total Waste in cum
	Cum	MT			
1 st Year	37129.80	103963.44	2534.00	1954.20	4488.20
2 nd Year	37335.00	104538.00	700.00	1965.00	2665.00
3 rd Year	37346.40	104569.92	1750.00	1965.60	3715.60
4 th Year	36617.75	102529.70	1300.00	1927.25	3227.25
5 th Year	37121.25	103939.50	0.0	1953.75	1953.75

Total	185550.20	519540.56	6284.00	9765.80	16049.80
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Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Excavation	0.09	1.46	1.46 (1.46 Ha area left as water reservoir for rain water harvesting)
Road	0.03	Nil (within quarry)	Nil (comes under quarry)
Safety Zone	Nil	0.70 (Plantation)	0.70 (Plantation))
Total	0.12	2.16	2.16
Unused	2.04	0.0	0.0
Total area	2.16		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.70	1120	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	165	330	2m X 2 m spacing in two rows both side		
Total		1450			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars	Capital	Recurring
Land	53,30,000.00	5,33,000.00

Infrastructure			1500000.00	150000.00
Mining Equipment			0.00	5100000.00
<i>Equipment</i>	<i>Quantity</i>	<i>Rent per year</i>		
Wagon drill	2	8,00,000		
Excavator	2	8,00,000		
Compressor	1	10,00,000		
Hyva/Dumper	2	4,00,000		
Water Sprinkler	1	6,00,000		
DG Set	1	15,00,000		
@ Per wagon drill- 4,00,000/- @Per Excavator-4,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Dumper-2,00,000/- @Per Loader-3,00,000/- @DG set -15,00,000/-				
Water Facility for Domestic Purpose "0.18" KLD (Annual Water Demand "54"KL @4L per person , total number of tanker required ("14") and per tanker cost @Rs. 500)			0.00	7000.00
Statutory Clearances.			500000.00	0.00
Mine Closure Cost for fencing around mine.			150000.00	0.00
Environment Management Plan (EMP) Cost			14,49,000.00	7,66,500.00
Total			89,29,000.00	65,56,500.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
1450 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	4,35,000	87,000
Water Tanker @Rs. 500 per Tanker for Dust Suppression (0.99 KLD) & Horticulture (8.70 KLD) 0.99 + 8.70 = 9.69 KLD 9.69KLD X 300 Days = 2907 KLD 2907 KLD / 4 KLD = 726.75 or 727 Tankers	0	3,63,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	8,64,000	2,16,000
Garland Drain & Retaining wall	1,50,000	50,000
Total	14,49,000	7,66,500

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

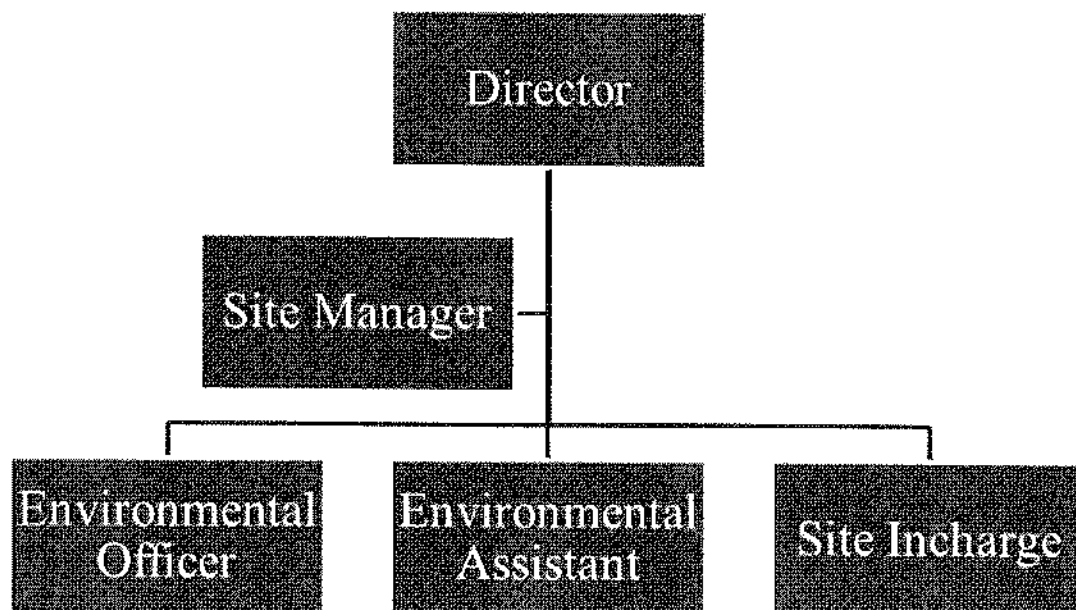
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	It can be seen from the development programme that there will be generation total 16049.80 cum waste during the plan period of five years. Removal of waste materials will be at first temporarily dumped within the applied lease area, than total removal waste materials will be backfilled within the exhausted quarry.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	- Mining will be confined only above the Ground Water Table (GWT). Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. Garland and foot drains will be constructed around the quarry to control surface runoff. Sewage from rest shelters will be treated through septic tank-soak pit systems.

	• Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961).

	▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.

Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Sosomuli Stone Mine of M/s Leading Construction (Prop. : Shri Jai Prakash Singh), Village : Sosomuli, P.S. : Rajnagar, Distt. : Saraikela-Kharsawan, Jharkhand (2.16 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- l. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.

- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- III. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- IV. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- V. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- VI. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VII. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VIII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- IX. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- X. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- XI. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

10. Tentoposi Stone Deposit of M/s Maa Banbhor Devi Stone Crusher (Prop. : Shri Manish Agarwal), Village : Tentoposi, Anchal : Saraikela, Distt. : Saraikela-Kharsawan, Jharkhand (1.821 Ha).

(Proposal no.: SIA/JH/MIN/583457/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity –58208 cum/annum or 157163 TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Tentoposi Stone Deposit
2	Lessee	: M/S Maa Banbhor Devi Stone Crusher Proprietor- Sri Manish Agarwal
3	Lessee Address	: Village- Matigonda, PO- Rakha Copper Project, District- East Singhbhum, Jharkhand.
4	Lease Area	: 1.821 Ha. 4.50 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 80.924 Lakh
7	EMP Budget	: Capital: Rs. 14.424/-Lakh Recurring: Rs 8.215 /- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 742862 tones 275134 Cum
10	Mine Life	: 5 years
11	Man power	: 17
12	Water Requirement	: 12.77~ 13.0 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: 50 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: Water bodies are approx 500 meter as per CO, but as per Google Earth Pond is at the distance of 454meter in SSW direction from mine site, EMP Submitted.
17	Nearest Habitation	: Habitation is approx 500meter as per CO, but as per Google Earth Nearest Habitation 340 meter towards SSW direction EMP Submitted.
18	Nearest Rail Station	: Sini Junction, approx. 10.89 km towards NW direction
19	Nearest Air Port	: Birsa Munda Airport, Ranchi approx. 96.80 km towards NW

		:	direction.
20	Road & Highways	:	NH – 43, Approx.6.31km towards NW direction.
21	Approach Road	:	approx, 15 meters
22	Cluster Certificate	:	Cluster certificate has been issued by DMO, Saraikela- Kharswan vide letter no. 726/M, Dated 12.06.2026, certified that One mine exists within 500m radius, total cluster area is 7.0acre.
23	Nearest Forest	:	The distance of reserved / protected forest is 1.50Km from the proposed project site as per the Divisional Forest Officer, Seraikela Forest Division, vide letter no.: 780/Seraikela, dated 20/05/2026.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 25.40 Km from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.

CO-ORDINATES

PILLAR ID	LATITUDE	LONGITUDE
P1	22°43'23.32340"	86°01'37.13498"
P2	22°43'22.58544"	86°01'38.49629"
P3	22°43'21.48478"	86°01'40.59883"
P4	22°43'20.99280"	86°01'39.69919"
P5	22°43'21.05029"	86°01'39.44280"
P6	22°43'21.03128"	86°01'39.08341"
P7	22°43'20.57362"	86°01'39.12550"
P8	22°43'20.65440"	86°01'39.54479"
P9	22°43'20.33209"	86°01'40.05181"
P10	22°43'19.14935"	86°01'39.39240"
P11	22°43'19.27445"	86°01'38.74228"
P12	22°43'19.02857"	86°01'38.62808"
P13	22°43'18.70630"	86°01'39.39553"
P14	22°43'17.98540"	86°01'38.99255"
P15	22°43'17.46509"	86°01'38.88214"
P16	22°43'17.87167"	86°01'37.83310"
P17	22°43'19.31808"	86°01'34.60274"
P18	22°43'19.37503"	86°01'36.04177"
P19	22°43'19.66523"	86°01'36.22519"
P20	22°43'20.00546"	86°01'35.57726"
P21	22°43'20.38969"	86°01'34.50169"
P22	22°43'21.41339"	86°01'35.07020"
P23	22°43'22.10664"	86°01'35.88146"
P24	22°43'22.36904"	86°01'36.02057"
P25	22°43'22.64160"	86°01'36.19711"

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P26	22°43'23.02511"	86°01'36.70252"
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LAND DETAILS

Khata no.	Plot no.
60	1112 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Saraikela-Kharsawan vide letter no. 415/M, dated 15.04.2026.
2	CO	:	The CO, Saraikela vide letter no. 1350, dated 27.09.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in Khatiyani. During the appraisal it was seen from the KML that few houses exists at a distance of 340 meters and Pond exists at a distance of 454 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Saraikela-Kharsawan vide letter no. 726/M, dated 12.06.2026 certified that 01 other LoI (2.50 Acre) exists within 500 meters radius from proposed project site and total area is 7.00 Acre.
4	DFO Wild Life	:	Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 535, dated 31.03.2021 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Saraikela Forest Division, Saraikela vide letter no. 780, dated 20.05.2026 certified that the distance of notified forest is 1.5 KM from proposed project site.
6	DSR	:	The DMO, Saraikela-Kharsawan has certified vide memo no. 807/M, dated 24.06.2026 that this project is mentioned in approved DSR of Saraikela-Kharsawan District as a potential area (Page no. 19, Sl. no. 1148).
7	Gram Sabha	:	BDO, Gamharla vide letter no. 413, dated 20.03.2026 Gram Sabha conducted on 16.03.2026.
8	Mine Plan	:	Approved by DMO, Saraikela-Kharsawan vide Letter No.

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	Approval		751/Mining, dated 16.06.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/75/2026/3189, dated : 20.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Semi- Mechanized Method
2	Quarry Area	:	1.269 Ha
3	Waste Generation	:	26626 cum
4	Stripping Ratio	:	1:0.035
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	183m AMSL to 180 m AMSL
8	Ground Level Elevation	:	180m AMSL
9	Ultimate Working Depth	:	125m AMSL (55mbgl)
10	Water Table	:	110-117m AMSL (70-63mbgl)
11	Topography of Mine	:	Area represents small hillock
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of Stone in cum	production of stone in Tonnes	Overburden in cum	Intercalated waste in cum	Total waste in cum
1 st Year	52261	141106	4624	2751	7375
2 nd Year	53295	143897	0	2805	2805
3 rd Year	54603	147429	7521	2874	10395
4 th Year	56766	153269	0	2988	2988
5 th Year	58208	157163	0	3064	3064
Total	275134	742862	12145	14481	26626

Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Quarry	0.757	1.269	1.269 (0.188 ha area shall be backfilled, 0.603ha converted into water reservoir & 0.478ha left as dead bench)
Waste Dump	Nil	Nil	Nil
Road	0.051	Nil	Nil
Crusher	Nil	Nil	Nil
Safety zone & Road Barrier Plantation	0.364	0.552 (0.188 ha S.Z. area shall Be Backfilled)	0.552
Total	1.172	1.821	1.821
Unused area	0.649	0.0	0.0
Total Lease area	1.821		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.552	884	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	15	30	2m X 2 m spacing in two rows both side		
Plantation at backfilling	0.188	301	1600 Tree per Hectare	At the end of plan period	
Plantation at Dead bench	0.478	765			
Total		1980			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

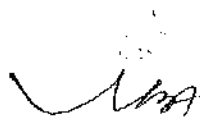
Particulars	Capital	Recurring
Land	4500000.00	450000.00

Infrastructure			1500000.00	150000.00
Mining Equipment			0.00	2900000.00
Equipment	Quantity	Rent per year		
Wagon drill	1	400000		
Excavator	1	400000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Dumper	1	200000		
Loader	1	300000		
@Per Rock breaker - 4,00,000/- @Per Excavator-4,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Dumper-2,00,000/- @Per Loader-3,00,000/-				
Water Facility for Domestic Purpose "0.17" KLD (Annual Water Demand "51"KL @4L per person , total number of tanker required ("13") and per tanker cost @Rs. 500)			0.00	6500.00
Statutory Clearances.			500000.00	0.00
Mine Closure Cost for fencing around mine.			150000.00	0.00
Environment Management Plan (EMP) Cost			1442400.00	821500.00
Total			8092400.00	4328000.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

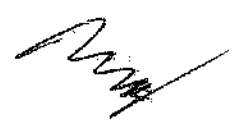
Particulars	Capital	Recurring
1980Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	5,94,000.00	99,000.00
Water Tanker @Rs. 500 per Tanker for Dust Suppression (0.0.72 KLD) & Horticulture (11.88 KLD) $0.72 + 11.88 = 12.6$ KLD 12.6 KLD X 300 Days = 3780 KLD 3780 KLD / 4 KLD =945Tankers	0.00	4,72,500.00
Environment Monitoring & Compliance	0.00	50,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	7,28,400.00	1,50,000
Garland Drain & Retaining wall	1,20,000.00	50,000.00
Total	14,42,400.00	8,21,500.00

Environment Monitoring Plan

 A

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Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
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4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- In this applied lease area, the stone deposit is covered with 2m layer of gritty intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. - It has been calculated that total 26626 cum in-situ 31444.03 cum loose & 26727.42 cum compact waste shall be generated, which used for backfilling of already excavated part of safety zone at northern and eastern part and it will cover about 0.188 ha area. - While excavation of insitu waste, its volume shall be increase, as it becomes loose (insitu cum X 1.25), during the dumping/backfilling these loose materials shall be compacted with the use of dozer and volume will be decreased up to 85% of loose waste.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	- Mining will be confined only above the Ground Water Table (GWT). Rainwater accumulated in the pit will be collected and pumped out

	regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.

Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the

	local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

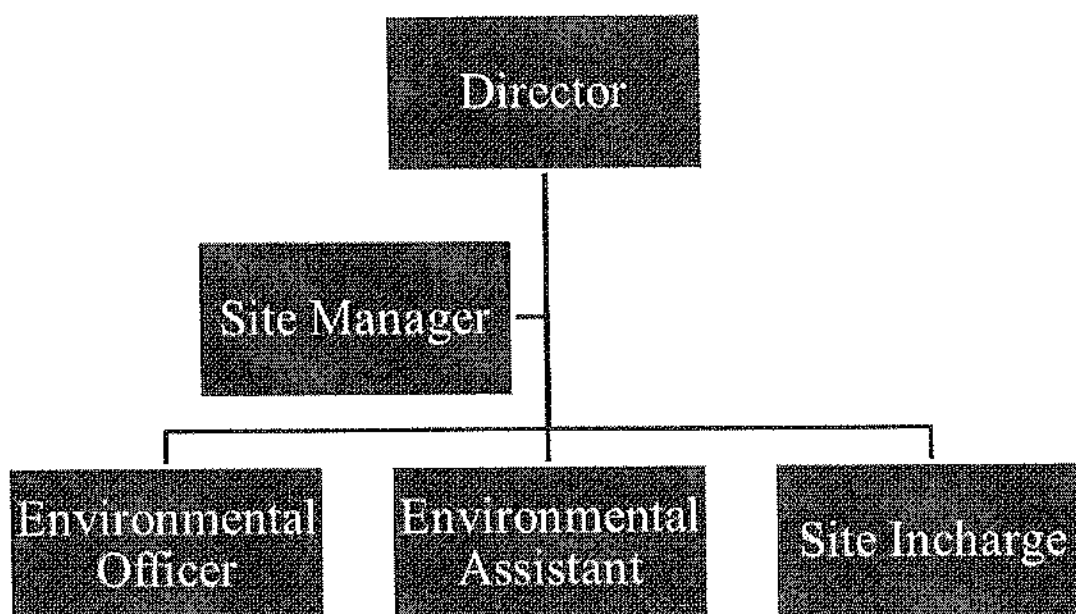
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Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.

- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Tentoposi Stone Deposit of M/s Maa Banbhor Devi Stone Crusher (Prop. : Shri Manish Agarwal), Village : Tentoposi, Anchal : Saraikela, Distt. : Saraikela-Kharsawan, Jharkhand (1.821 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/75/2026/3189, dated : 20.08.2026 is also included as Annexure – I (I) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby pond due to the mining activities.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VII. Pre employment Occupational health check up for employees to be done and

- thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

11. Tentoposi Stone Deposit of M/s Maa Banbhor Devi Stone Crusher (Prop. : Shri Manish Agarwal), Village : Tentoposi, Anchal : Saraikela, Distt. : Saraikela-Kharsawan, Jharkhand (1.011 Ha).

(Proposal no.: SIA/JH/MIN/583538/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 18986 cum/annum or 51262 TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Tentoposi Stone Deposit
2	Lessee	: M/s Maa Banbhor Devi Stone Crusher Proprietor: Sri Manish Agarwal.
3	Lessee Address	: Village- Matigonda, P.O.- Rakha Copper Project, District- East Singhbhum, Jharkhand
4	Lease Area	: 1.011 Ha. 2.50 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 55.362 Lakh
7	EMP Budget	: Capital: Rs. 8.862/-Lakh Recurring: Rs. 5.724 /- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 219654 tones 81353 Cum

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10	Mine Life	:	5 years
11	Man power	:	16
12	Water Requirement	:	8.44~ 8.50 KLD
13	Water Source	:	By authorised hired water tankers
14	DG Set / power	:	50 KVA
15	Crusher	:	No crusher
16	Nearest Water Body	:	Pond approx 327 meter as per Google Earth , EMP Submitted
17	Nearest Habitation	:	Nearest Habitation 410 meter as per Google Earth, EMP Submitted
18	Nearest Rail Station	:	Birbans Railway Station, approx. 8.22 km towards NNW direction
19	Nearest Air Port	:	Birsa Munda Airport, Ranchi approx. 97.68 km towards NW direction
20	Road & Highways	:	NH – 43, Approx. 5.58 km towards NW direction.
21	Approach Road	:	approx, 175 meters
22	Cluster Certificate	:	Cluster certificate has been issued by DMO, Saraikela- Kharswan vide letter no. 727/M, Dated 12.06.2026, certified that One mine exists within 500m radius, total cluster area is 7.0acre
23	Nearest Forest	:	The distance of reserved / protected forest is more than 500m from the proposed project site as per the Divisional Forest Officer, Seraikela Forest Division, vide letter no.: 779/Seraikela, dated 20.05.2026.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 26.68 KM from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.

CO-ORDINATES

Pillar ID	Latitude	Longitude
1	22° 43' 19.452" N	86° 1' 44.359" E
2	22° 43' 17.318" N	86° 1' 43.329" E
3	22° 43' 16.039" N	86° 1' 42.882" E
4	22° 43' 14.498" N	86° 1' 42.887" E
5	22° 43' 13.557" N	86° 1' 42.063" E
6	22° 43' 13.157" N	86° 1' 40.183" E
7	22° 43' 13.808" N	86° 1' 39.971" E
8	22° 43' 13.044" N	86° 1' 37.717" E
9	22° 43' 13.194" N	86° 1' 37.073" E
10	22° 43' 14.780" N	86° 1' 38.580" E
11	22° 43' 14.545" N	86° 1' 39.379" E
12	22° 43' 15.795" N	86° 1' 41.607" E

13	22° 43' 16.882" N	86° 1' 41.833" E
14	22° 43' 17.541" N	86° 1' 42.391" E
15	22° 43' 19.423" N	86° 1' 43.832" E

LAND DETAILS

Khata no.	Plot no.
60, 61 & 242	1287, 1288, 1291, 1292, 1293 (P) & 1289 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	: The Letter of Intent (LoI) has been issued by District Mining Officer, Saraikela-Kharsawan vide letter no. 624/M, dated 27.05.2026.
2	CO	: The CO, Saraikela vide letter no. 616, dated 19.05.2026 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyani & Register II. During the appraisal it was seen from the KML that few houses exist at a distance of 410 meters and Pond exists at a distance of 327 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	: DMO, Saraikela-Kharsawan vide letter no. 727/M, dated 12.06.2026 certified that 01 other LoI (4.50 Acre) exists within 500 meters radius from proposed project site and total area is 7.00 Acre.
4	DFO Wild Life	: Deputy Conservator of Forest & Field Director, Elephant Project, Jamshedpur vide letter no. 396, dated 23.03.2026 certified that the proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
5	DFO Territorial	: Divisional Forest Officer, Saraikela Forest Division, Saraikela vide letter no. 779, dated 20.05.2026 certified that the distance of notified forest is 500 meters from proposed project site.
6	DSR	: The DMO, Saraikela-Kharsawan has certified vide memo no. 806/M, dated 24.06.2026 that this project is mentioned in approved DSR of Saraikela-Kharsawan District as a potential area (Page no. 19, Sl. no. 1148).
7	Gram Sabha	: BDO, Gamharía vide letter no. 412, dated 20.03.2026 Gram Sabha conducted on 16.03.2026.

8	Mine Plan Approval	:	Approved by DMO, Saraikela-Kharsawan vide Letter No. 750/Mining, dated 16.06.2026.
9	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Semi- Mechanized Method
2	Quarry Area	:	0.536 Ha
3	Waste Generation	:	14092 cum
4	Stripping Ratio	:	1:0.064
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	183m AMSL to 177m AMSL
8	Ground Level Elevation	:	177 m AMSL
9	Ultimate Working Depth	:	155 m AMSL (22 mbgl)
10	Water Table	:	110-117 m AMSL (67-60mbgl)
11	Topography of Mine	:	Area represents small hillock
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of Stone in cum	production of stone in Tonnes	Overburden in cum	Intercalated waste in cum	Total waste in cum
1st Year	14450	39014	3510	761	4271
2nd Year	15005	40514	1365	790	2155
3rd Year	15561	42015	0	819	819
4th Year	17352	46850	3575	913	4488
5th Year	18986	51262	1360	999	2359
Total	81354	219654	9810	4282	14092

Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Quarry	Nil	0.536	0.536 (0.060 ha area shall be backfilled, 0.476 ha converted into water reservoir)
Waste Dump	Nil	Nil	Nil

Road	Nil	Nil	Nil
Safety zone	Nil	0.475 (Plantation)	0.475 (Plantation)
Total	0.00	1.011	1.011
Unused Area	1.011	0.0	0.0
Total Lease Area	1.011		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.475	760	1600 Tree per Hectare	1st Year	Jackfruit, Babul, Arjuna, Gulmohar, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	175	350	2m X 2 m spacing in two rows both side		
Plantation Backfilling at	0.060	96	1600 Tree per Hectare	At the end of plan period	
Total		1206			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with, the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars	Capital(Rs.)	Recurring(Rs.)
Land	25,00,000.00	2,50,000.00
Infrastructure	15,00,000.00	1,50,000.00

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Mining Equipment			0.00	43,00,000.00
Equipment	Quantity	Rent per year		
Wagon drill	1	4,00,000		
Excavator	1	4,00,000		
Rock Breaker	1	2,00,000		
Compressor	1	10,00,000		
Water Sprinkler	1	6,00,000		
Dumper	1	2,00,000		
DG Set	1	15,00,000		
@Per wagon drill- 4,00,000/- @Per Excavator-4,00,000/- @Per Rock Breaker-2,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Dumper-2,00,000/- @Per Loader-3,00,000/- @DG set -15,00,000/-				
Water Facility for Domestic Purpose "0.16" KLD (Annual Water Demand "48"KL @4L per person , total number of tanker required ("12") and per tanker cost @Rs. 500)			0.00	6000.00
Statutory Clearances.			5,00,000.00	0.00
Mine Closure Cost for fencing around mine.			1,50,000.00	0.00
Environment Management Plan (EMP) Cost			8,86,200.00	5,72,400.00
Total			55,36,200.00	52,78,400.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
1206 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	3,61,800	60,300
Water Tanker @Rs. 500 per Tanker for Dust Suppression (1.05 KLD) & Horticulture (7.236 KLD) 1.05 + 7.236 = 8.286 KLD 8.286 KLD X 300 Days = 2486 KLD 2486 KLD / 4 KLD = 622 Tankers	0	3,11,000
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	4,04,400	1,01,100

Garland Drain & Retaining wall	1,20,000	50,000
Total	8,86,200	5,72,400

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- In this applied lease area, the stone deposit is covered with 2m layer of gritty intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. - It has been calculated that total 14092 cum in-situ waste shall be generated during this plan period, out of which 7943 cum (In situ) shall be utilized for approach & haul road maintenance. - The rest waste material 6149 cum in situ 7049.11 cum loose & 5991.75 cum compact waste shall be temporary dumped on central part of the applied lease area, up to third year and during 4th & 5th year the generated waste and waste materials of past dumping shall be removed and used for backfilling of exhausted part of quarry at southern part and it will cover about 0.060 ha area. - While excavation of insitu waste, its volume shall be increase, as it becomes loose (insitu cum X 1.25), during the dumping backfilling these loose materials shall be compacted with the use of dozer and volume will be decreased up to 85% of loose waste. - Garland drain shall be provided along the OB dump. This drain would collect surface run off from dump body. Water collected in this drain would be stored in a sedimentation tank, the treated water shall be

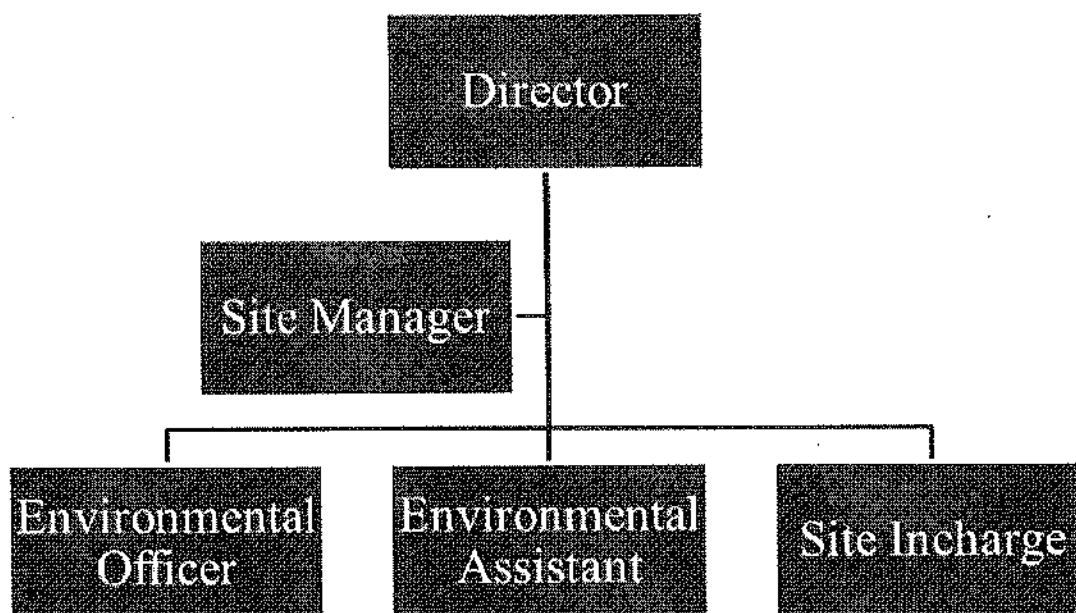
	released for natural runoff.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
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Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are

Explosives	completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for

	the purpose by the management. - Navigation signs will be provided at each and every turning point up to the main road (wherever required). - To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.

- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Tentoposi Stone Deposit of M/s Maa Banbhoori Devi Stone Crusher (Prop. : Shri Manish Agarwal), Village : Tentoposi, Anchal : Saraikela, Distt. : Saraikela-Kharsawan, Jharkhand (1.011 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby pond due to the mining activities.
- III. This proposal was forwarded through PARIVESH Portal to Jharkhand State Pollution Control Board (JSPCB) for providing comments / Environmental Safeguards. The proposal was returned to SEAC via same portal without providing comments / Environmental Safeguards. Hence in compliance of OM File No. Q-15012/2/2022-CPW-Part(1)/e-240741, dated 14.01.2025 and File No. Q-15012/2/2022-CPW9Part-I)/e-231973, dated 08.10.2025, the PAs will mandatorily obtain the Environmental Safeguard to be implemented from Jharkhand State Pollution Control Board.
- IV. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.

- V. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- VI. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VII. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VIII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests Summary findings of same to be submitted along with 6 monthly compliance.
- IX. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- X. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- XI. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

12. Asni Stone Deposit of Shri Ghura Oraon, Village : Asni, P.S. : Gumla, Distt. : Gumla, Jharkhand (1.865 Ha).

(Proposal no.: SIA/JH/MIN/585025/2026)

Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 25899 cum/annum or 69927 TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Asni Stone Deposit
2	Lessee	: Sri Ghura Oraon S/O- Late Ghuran Oraon
3	Lessee Address	: Village- Asni Tetartoli, P.O. Asni, District- Ghumla, Jharkhand
4	Lease Area	: 1.865 Ha. 4.61Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 83.601/- Lakh
7	EMP Budget	: Capital: Rs. 16.001/-Lakh Recurring: Rs. 7.923 /- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 592761 tones 219541 Cum
10	Mine Life	: 10 years
11	Man power	: 16
12	Water Requirement	: 10.51~11.0 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: 50 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: Seasonal Nallah, approx 78 meter towards west direction as per Google Earth, EMP submitted.
17	Nearest Habitation	: As per CO within 500 meters and As per Google Earth nearest Habitation is approx. 47meter towards SSE direction , EMP Submitted
18	Nearest Rail Station	: Bakaspur Railway Station, approx. 25.18 km towards East direction
19	Nearest Air Port	: Birsa Munda Airport, Ranchi approx. 50.91km towards ENE direction.
20	Road & Highways	: NH – 43, Approx. 0.74km towards SE direction. NH-143A, approx. 1.67km towards West direction..
21	Approach Road	: approx, 200 meters
22	Cluster Certificate	: Cluster certificate issued by DMO Gumla Vide Letter No. 752/M, Dated 29.06.2026 certified that one more lease exists within 500metre, total cluster area is 7.81acre.
23	Nearest Forest	: The distance of reserved/protected forest is 1.06Km from the proposed project site as per the Divisional Forest Office, Seraikela Forest Division, vide Letter no.: 1932, dated 13.06.2026.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	: The project location is at approx. 25.87km from the nearest Eco Sensitive Zone of Dalma wildlife Sanctuary.

CO-ORDINATES

Pillar ID	Latitude	Longitude
P1	23° 3' 44.891" N	84° 33' 59.725" E
P2	23° 3' 45.044" N	84° 34' 0.169" E
P3	23° 3' 44.354" N	84° 34' 1.161" E
P4	23° 3' 43.897" N	84° 34' 2.197" E
P5	23° 3' 44.544" N	84° 34' 3.449" E
P6	23° 3' 44.680" N	84° 34' 3.445" E
P7	23° 3' 44.715" N	84° 34' 4.015" E
P8	23° 3' 44.352" N	84° 34' 4.189" E
P9	23° 3' 44.332" N	84° 34' 4.750" E
P10	23° 3' 45.143" N	84° 34' 4.619" E
P11	23° 3' 45.063" N	84° 34' 6.089" E
P12	23° 3' 44.344" N	84° 34' 6.517" E
P13	23° 3' 43.717" N	84° 34' 6.862" E
P14	23° 3' 43.768" N	84° 34' 8.069" E
P15	23° 3' 40.427" N	84° 34' 8.076" E
P16	23° 3' 38.872" N	84° 34' 8.159" E
P17	23° 3' 38.802" N	84° 34' 6.413" E
P18	23° 3' 39.556" N	84° 34' 6.251" E
P19	23° 3' 41.419" N	84° 34' 6.064" E
P20	23° 3' 42.501" N	84° 34' 5.841" E
P21	23° 3' 43.424" N	84° 34' 5.661" E
P22	23° 3' 43.375" N	84° 34' 4.979" E
P23	23° 3' 43.318" N	84° 34' 3.858" E
P24	23° 3' 42.939" N	84° 34' 3.801" E
P25	23° 3' 42.635" N	84° 34' 2.526" E
P26	23° 3' 42.502" N	84° 34' 2.041" E
P27	23° 3' 42.551" N	84° 34' 1.743" E
P28	23° 3' 42.782" N	84° 34' 1.667" E
P29	23° 3' 42.616" N	84° 34' 0.797" E
P30	23° 3' 42.303" N	84° 34' 0.839" E
P31	23° 3' 42.143" N	84° 34' 0.737" E
P32	23° 3' 42.084" N	84° 34' 0.017" E
P33	23° 3' 42.624" N	84° 34' 0.004" E
P34	23° 3' 43.394" N	84° 33' 59.806" E
P35	23° 3' 44.216" N	84° 33' 59.729" E

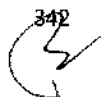
LAND DETAILS

Khata no.	Plot no.
24	2733, 2734, 2735 & 2737

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Deputy Commissioner, Gumla vide letter no. 743/M, dated 27.06.2026.
2	CO	:	The CO, Gumla (Sadar) vide letter no.518/Ra., dated 25.06.2026 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyar & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 47 meters and Nala exists at a distance of 78 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Gumla vide memo no. 752/M, dated 29.06.2026 certified that 01 other mining lease area (3.20 Acre) exists within 500 meters radius from proposed project site and total area is 7.81 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Ranchi vide letter no. 467, dated 18.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Gumla Forest Division vide letter no. 1932, dated 13.06.2026 certified that the distance of notified forest is 1.06 KM from proposed project site.
6	DSR	:	The DMO, Gumla has certified vide memo no. 751/M, dated 29.06.2026 that this project is mentioned in approved DSR of Gumla District as a potential area (Page no. 47, Sl. no. 02).
7	Gram Sabha	:	BDO, Gumla Sadar vide letter no. 878 (ii), dated 12.06.2026 informed that Gram Sabha conducted on 02.05.2026.
8	Mine Plan Approval	:	Approved by DMO, Gumla vide Letter No. 754/M, dated 29.06.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/71/2026/3181, dated : 19.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

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Working Details

1	Mining Method	:	Opencast Semi- Mechanized Method
2	Quarry Area	:	1.162 Ha
3	Waste Generation	:	23379 cum
4	Stripping Ratio	:	1:0.07
5	Working Days	:	300
6	Benches: size & No	:	6m to 6m
7	Elevation of Mine	:	661 m AMSL to 653 m AMSL
8	Ground Level Elevation	:	653 m AMSL
9	Ultimate Working Depth	:	635 m AMSL (18 mbgl)
10	Water Table	:	610 -607 m AMSL (46-43 mbgl)
11	Topography of Mine	:	Area represents small hillock
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of stone		Overburden cum	Intercalated waste in cum	Total Waste in cum
	Cum	MT			
1 st Year	20425	55148	14792	1075	15867
2 nd Year	21242	57353	2580	1118	3698
3 rd Year	22468	60662	0	1183	1183
4 th Year	24102	65074	0	1269	1269
5 th Year	25899	69927	0	1363	1363
Total	114135	308164	17372	6007	23379

Land Use

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At conceptual period (Ha)
Quarry	0.292	0.684 (0.099ha area backfilled)	1.162 (0.311 ha area shall be Backfilled, 0.649 ha converted in to water reservoir & 0.202 ha shall be left as dead benches)
Waste Dump	0.0	0.168	Nil (comes under quarry)
Road	0.0	0.005	Nil (comes under quarry)
Crusher	0.0	0.0	Nil
Safety zone Plantation	0.0	0.703	0.703
Total	0.292	1.560	1.865
Unused Area	1.573	0.305	0.0

Total Lease Area	1.865
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Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.703	1125	1600 Tree per Hectare	1st Year	Jackfruit, Arjuna, Sal, Neem, Pipal, Mango, Etc.
Length of Approach Road Area (m.)	200	400	2m X 2 m spacing in two rows both side		
Plantation at Backfilling	0.311	498	1600 Tree per Hectare	At the end of plan period	
Plantation at Dead Bench	0.202	324			
Total		2347			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars			Capital	Recurring
Land			46,10,000.00	4,61,000.00
Infrastructure			15,00,000.00	1,50,000.00
Mining Equipment			0.00	41,00,000.00
Equipment	Quantity	Rent per year		
Excavator	1	4,00,000		
Rock Breaker	1	2,00,000		
Wagon drill/Compressor	1	10,00,000		
Dumper	1	2,00,000		
Loader	1	2,00,000		
Water Sprinkler	1	6,00,000		
DG Set	1	15,00,000		
@Per Excavator-4,00,000/-				
@Per Rock Breaker-2,00,000/-				
@Per Compressor-10,00,000/-				
@Per Water Sprinkler -6,00,000/-				

@Per Dumper-2,00,000/- @DG set -15,00,000/- @Loader – 2,00,000/-		
Water Facility for Domestic Purpose "0.16" KLD (Annual Water Demand "48"KL @4L per person , total number of tanker required ("12") and per tanker cost @Rs. 500)	0.00	6,000.00
Statutory Clearances.	5,00,000.00	0.00
Mine Closure Cost for fencing around mine.	1,50,000.00	0.00
Environment Management Plan (EMP) Cost	16,00,100.00	7,92,350.00
Total	83,60,100.00	55,09,350.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
2347 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	7,04,100	1,17,350
Water Tanker @Rs. 500 per Tanker for Dust Suppression (1.2KLD) & Horticulture (9.15KLD) 1.2+ 9.15= 10.35KLD 10.35KLD X 300 Days = 3105KLD 3105KLD / 4 KLD = 777Tankers	0	3,88,500
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF& CC	7,46,000	1,86,500
Garland Drain & Retaining wall for Seasonal Nallah	1,50,000	50,000
Total	16,00,100	7,92,350

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly

4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly
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Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- In this applied lease area, the stone deposit is covered with 2m layer of gritty intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. - It has been calculated that total 23379 cum in-situ waste shall be generated during this plan period, out of which 14572 cum (In situ) shall be utilized for approach & haul road maintenance. - The rest waste material 8807 cum in situ 11008.27 cum loose & 9357.03 cum compact waste shall be generated. During the 1st & 2nd year 7218 cum waste shall be used for backfilling of excavated part of safety zone and third year onwards 1589 cum waste shall be temporarily dumped at central part of the applied area and it will cover about 0.168ha area. - While excavation of insitu waste, its volume shall be increase, as it becomes loose (insitu cum X 1.25), during the dumping/backfilling these loose materials shall be Compacted with the use of dozer and volume will be decreased up to 85% of loose waste. - Garland drain shall be provided along the OB dump. This drain would collect surface run off from dump body. Water collected in this drain would be stored in a sedimentation tank the treated water shall be released for natural runoff.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	- Mining will be confined only above the Ground Water Table (GWT). Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. Garland and foot drains will be constructed around the quarry to control surface runoff. Sewage from rest shelters will be treated through septic tank-soak pit systems. - Foot drain would be provided around the external dump, if any.
Noise Quality	Mining activities will be restricted to daytime and carried out with

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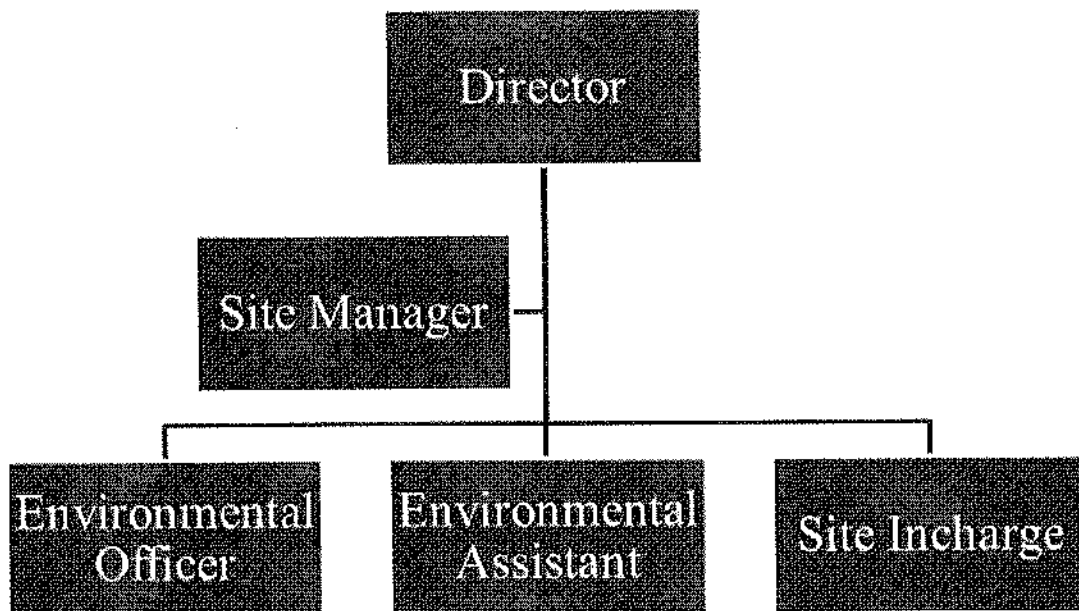
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Management	controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the

	edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level

Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

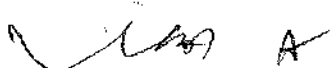
Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.

- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Asni Stone Deposit of Shri Ghura Oraon, Village : Asni, P.S. : Gumla, Distt. : Gumla, Jharkhand (1.865 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/71/2026/3181, dated : 19.08.2026 is also included as Annexure – I (J) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a





time bound manner.

- V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

13. Mahjori Stone Deposit of M/s Siyaram Stone (Partners : (i) Shri Hiralal Mandal (ii) Shri Dinesh Kumar Gupta (iii) Shri Birendra Shaw), Village : Mahjori, Anchal : Margomunda, Distt. : Deoghar, Jharkhand (2.226 Ha).

(Proposal no.: SIA/JH/MIN/579041/2026)

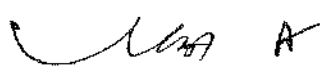
Name of the consultant : P & M Solution, Noida, U.P

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

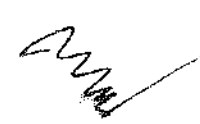
Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 67331 cum/annum or 181794









Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Mahjori Stone Deposit
2	Lessee	: M/s Siyaram Stone Partners: 1. Sri Hiralal Mandal S/o- Sri Panchu Mandal 2. Sri Dinesh Kumar Gupta, S/o Sri Raghunandan Shaw. 3. Sri Birendra Shaw S/o Sri Bahadur Shaw
3	Lessee Address	: Partners: 1. Sri Hiralal Mandal S/o- Sri Panchu Mandal, Vill.- Bhandro, PO+Thana- Margomunda, Dist. Deoghar, Jharkhand 2. Sri Dinesh Kumar Gupta, S/o Sri Raghunandan Shaw, Vill.-Steel Gate Saraidhela, Nishchitpur Dist-Dhanbad, Jharkhand. 3. Sri Birendra Shaw S/o Sri Bahadur Shaw, Vill- Simradih, PO- Gaadi Bharkatta, Dist-Girgidi, Jharkhand.
4	Lease Area	: 2.226 Ha. 5.50 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 92.86 Lakh
7	EMP Budget	: Capital: Rs. 19.562/-Lakh Recurring: Rs 10.784 /- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 841820 tones 311785.18 Cum
10	Mine Life	: 5 years
11	Man power	: 20
12	Water Requirement	: 16.50 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: 50 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: Seasonal Nallah is approx. 10 meter as per Google Earth from mine site, EMP Submitted.
17	Nearest Habitation	: Nearest Habitation 180 meter towards east direction as per Google Earth, EMP Submitted.
18	Nearest Rail Station	: Madankata Railway station, approx. 9.26 km towards East direction
19	Nearest Air Port	: Deoghar Airport approx. 31.98 km towards NNE direction.
20	Road & Highways	: NH-114A approx 11.61km, NNE direction
21	Approach Road	: approx, 560 meters
22	Cluster Certificate	: Cluster certificate has been issued by DMO, Deoghar vide letter no. 293/M, Dated 13.05.2025, certified that three mine exists within 500m radius, total cluster area is 12.30 acre

23	Nearest Forest	:	The distance of reserved / protected forest is 2405 m from the proposed project site as per the Divisional Forest Officer, Deoghar Forest Division, vide letter no.: 888, dated 30/08/2025.
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 27.07 Km from the nearest Eco Sensitive Zone of Parasnath wildlife Sanctuary.

CO-ORDINATES

Point	Latitude	Longitude
P1	24° 9' 58.246" N	86° 36' 44.817" E
P2	24° 9' 58.110" N	86° 36' 45.342" E
P3	24° 9' 57.786" N	86° 36' 45.186" E
P4	24° 9' 57.171" N	86° 36' 46.815" E
P5	24° 9' 57.196" N	86° 36' 46.969" E
P6	24° 9' 57.133" N	86° 36' 47.415" E
P7	24° 9' 57.842" N	86° 36' 48.074" E
P8	24° 9' 58.661" N	86° 36' 48.817" E
P9	24° 9' 57.712" N	86° 36' 49.220" E
P10	24° 9' 57.120" N	86° 36' 49.500" E
P11	24° 9' 56.642" N	86° 36' 49.614" E
P12	24° 9' 56.332" N	86° 36' 49.446" E
P13	24° 9' 56.112" N	86° 36' 49.377" E
P14	24° 9' 55.653" N	86° 36' 49.043" E
P15	24° 9' 55.377" N	86° 36' 48.756" E
P16	24° 9' 55.705" N	86° 36' 47.768" E
P17	24° 9' 56.106" N	86° 36' 46.597" E
P18	24° 9' 55.710" N	86° 36' 46.501" E
P19	24° 9' 55.343" N	86° 36' 47.319" E
P20	24° 9' 55.110" N	86° 36' 48.039" E
P21	24° 9' 54.778" N	86° 36' 48.414" E
P22	24° 9' 54.742" N	86° 36' 48.623" E
P23	24° 9' 52.962" N	86° 36' 48.426" E
P24	24° 9' 51.407" N	86° 36' 48.202" E
P25	24° 9' 50.718" N	86° 36' 47.217" E
P26	24° 9' 50.947" N	86° 36' 46.655" E
P27	24° 9' 51.008" N	86° 36' 46.410" E
P28	24° 9' 51.351" N	86° 36' 45.771" E
P29	24° 9' 52.637" N	86° 36' 45.888" E
P30	24° 9' 53.609" N	86° 36' 45.975" E
P31	24° 9' 53.755" N	86° 36' 45.243" E
P32	24° 9' 53.832" N	86° 36' 44.635" E
P33	24° 9' 53.633" N	86° 36' 44.628" E
P34	24° 9' 53.822" N	86° 36' 43.896" E
P35	24° 9' 53.906" N	86° 36' 43.617" E
P36	24° 9' 54.047" N	86° 36' 43.368" E

P37	24° 9' 54.442" N	86° 36' 43.464" E
P38	24° 9' 54.360" N	86° 36' 43.661" E
P39	24° 9' 54.821" N	86° 36' 43.763" E
P40	24° 9' 55.690" N	86° 36' 44.095" E
P41	24° 9' 56.577" N	86° 36' 44.258" E
P42	24° 9' 57.266" N	86° 36' 44.435" E

LAND DETAILS

Khata no.	Plot no.
45 & 48	1235, 1236, 1238, 1314 & 1237 (P) & 1239 (P)

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Officer, Deoghar vide letter no. 143/M, dated 07.03.2026.
2	CO	:	The CO, Margomunda vide letter no. 263/Ra., dated 28.06.2025 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyan & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 180 meters and Seasonal Nala exists at a distance of 10 meter from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Deoghar vide memo no. 295/M, dated 13.05.2026 certified that 02 other mining lease area (2.00 Acre & 2.38 Acre) and 01 LoI (2.42 Acre) exists within 500 meters radius from proposed project site and total area is 12.30 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 1638, dated 02.09.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Deoghar Forest Division vide letter no. 888, dated 30.08.2025 certified that the distance of reserved / protected forest is 2405 meters from proposed project site.
6	DSR	:	The DMO, Deoghar has certified vide memo no. 293/M, dated 13.05.2026 that this project is mentioned in approved DSR of Gumla District as a Annexure -iv (Page no. 193).
7	Gram Sabha	:	BDO, Deoghar vide letter no. 588/Vi., dated 25.08.2025 informed that Gram Sabha conducted on 28.07.2025.

8	Mine Plan Approval	:	Approved by The Assistant Director, Geology, District Geological Office, Deoghar vide Memo No. 45/G, dated 18.04.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/66/2026/3195, dated : 20.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast Semi- Mechanized Method
2	Quarry Area	:	1.565 Ha
3	Waste Generation	:	34639 cum
4	Stripping Ratio	:	1:0.11
5	Working Days	:	300
6	Benches: size & No	:	6m to 6m
7	Elevation of Mine	:	253 m AMSL to 249 m AMSL
8	Ground Level Elevation	:	249 m AMSL
9	Ultimate Working Depth	:	220 m AMSL (29 mbgl)
10	Water Table	:	202 -205 m AMSL (44-47 mbgl)
11	Topography of Mine	:	Area represents undulating small hillock
12	Explosive Requirement	:	50 kg/day
13	Diesel/Fuel requirement	:	150 litre/day

Production Details

Year	Production of Stone in cum	Production of Stone in tones	Overburden in cum	Intercalated waste in cum	Total Waste in cum
1st	59983	161954	6050	3157	9207
2nd	61069	164916	0	3214	3214
3rd	57855	156209	0	3045	3045
4th	65536	176947	5460	3449	8909
5th	67331	181794	6720	3544	10264

Total	311774	841820	18230	16409	34639
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Land Use

Land Utilization	Existing (Ha)	Plan period(Ha)	Conceptual stage (Ha)
Excavation	0.394	1.565	1.565 (0.231ha area shall be backfilled, 1.110ha converted into water reservoir & 0.224ha shall be left as dead benches)
Road	0.058	0.0 (comes under quarry)	0.0 (comes under quarry)
River Barrier	0.013	0.013	0.013
Safety Zone	0.0	0.648 (0.140ha shall be backfilled & restored as S.Z.)	0.648
Total	0.465	2.226	2.226
Unused Area	1.761	0.0	0.0
Lease area	2.226		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
Area in Safety Zone (Ha.)	0.648	1037	1600 Tree per Hectare	1st Year	Pipal, Gulmohar Jackfruits, Mango, Jamun, Babul, Neem, Arjun, etc. .
Length of Approach Road Area (m.)	560	1120	2m X 2 m spacing in two rows both side		
Plantation at backfilling	0.224	359	1600 Tree per Hectare	At the End of the plan period	
Plantation at dead bench	0.231	370	1600 Tree per Hectare		
Total		2886			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development,

Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN RS)

PROJECT COST

Particulars			Capital	Recurring
Land			55,00,000.00	5,50,000.00
Infrastructure			12,00,000.00	1,20,000.00
Mining Equipment			0.00	29,00,000.00
<i>Equipment</i>	<i>Quantity</i>	<i>Rent per year</i>		
Excavator	1	4,00,000		
Rock Breaker	1	2,00,000		
Compressor	1	10,00,000		
Water Sprinkler	1	6,00,000		
Dumper	2	4,00,000		
Loader	1	3,00,000		
@Per rock breaker - 2,00,000/-				
@Per Excavator-4,00,000/-				
@Per Compressor-10,00,000/-				
@Per Water Sprinkler -6,00,000/-				
@Per Dumper-2,00,000/-				
@Per Loader-3,00,000/-				
Water Facility for Domestic Purpose "0.20" KLD (Annual Water Demand "60"KL @4L per Tanker, total number of tanker required ("15") and per tanker cost @Rs. 500)			0.00	7,500.00
Statutory Clearances.			5,00,000.00	0.00
Mine Closure Cost for fencing around mine.			1,30,000.00	0.00
Environment Management Plan (EMP) Cost			19,56,200.00	10,78,400.00
Total			92,86,200.00	46,55,900.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
2886 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	8,65,800	1,44,300
Water Tanker @Rs. 500 per Tanker for Dust Suppression (3.36 KLD) & Horticulture (12.94 KLD) 3.36+ 12.94 = 16.30 KLD 16.30 KLD X 300 Days = 4890 KLD	0	6,11,500

4890KLD / 4 KLD = 1223 Tankers		
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	8,90,400	2,22,600
Garland Drain & Retaining wall	2,00,000	50,000
Total	19,56,200	10,78,400

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

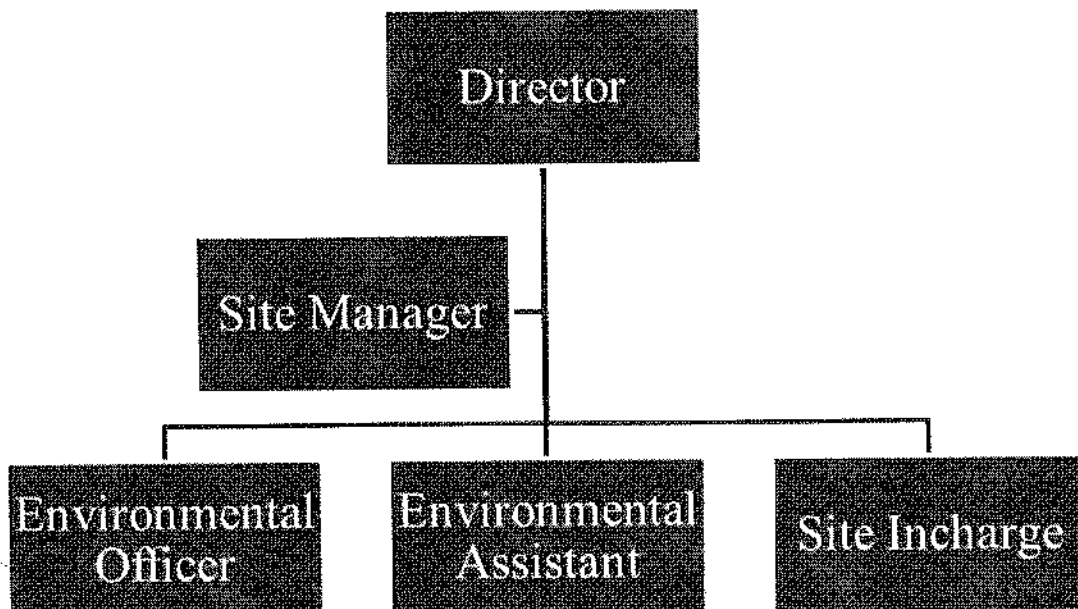
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	- There will be generation of waste is 40720.00 cum during this plan period. It is proposed that waste to be generated during first year will be temporary dumped i.e. 14000.00 cum towards southern side of applied area. - During 2nd & 3rd year generation of the waste is nil whereas first three year excavation and on ward 4th year part of quarry will exhausted and gradually backfilling shall be done till 5th year. There is 0.288 Ha area proposal of reclamation of pit period.
Air Quality Management	Wet drilling and use of sharp drill bits to minimize dust generation. Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates.

	• Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°.

	▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container.

	▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

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EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

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- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
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Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Mahjori Stone Deposit of M/s Siyaram Stone (Partners : (i) Shri Hiralal Mandal (ii) Shri Dinesh Kumar Gupta (iii) Shri Birendra Shaw), Village : Mahjori, Anchal : Margomunda, Distt. : Deoghar, Jharkhand (2.226 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as

provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/66/2026/3195, dated : 20.08.2026 is also included as Annexure – I (K) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign “*Ek Ped Ma Ke Naam*” and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- IV. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- V. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

14. Stone Deposit of M/s Karma Stone (Partners : Shri Manoj Mehta & Shri Santosh Mehta),
Village : Karma, Thana : Birni, Distt. : Giridih, Jharkhand (0.32 Ha).

(Proposal no.: SIA/JH/MIN/578115/2026)

Name of the consultant : P & M Solution, Noida, U.P.

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 8892.00cum/annum or 24008.40TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Karma Stone Deposit
2	Lessee	: M/S Karma Stone Partners: 1.Sri Manoj Mehta S/o Late Kedar Mehta 2. Sri Santosh Mehta S/o Late Chaman Mehta
3	Lessee Address	: Village- Phulwaria, Thana- Nawalshahi, District- Koderma, State- Jharkhand.
4	Lease Area	: 0.32 Ha. 0.81 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Rs. 18,08,000/-
7	EMP Budget	: Capital: Rs. 5.48/-Lakh Recurring: Rs. 4.95/- Lakh per year
8	New or Expansion	: New
9	Mineable Reserves	: 239699.25 tones 88777.5Cum
10	Mine Life	: 9.98 or 10 years
11	Man power	: 27
12	Water Requirement	: 8.85~9.0 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: 50 KVA
15	Crusher	: No crusher
16	Nearest Water Body	: Seasonal Nallah within 500 meters as per CO Certificate, EMP submitted.
17	Nearest Habitation	: Nearest Habitation 344 meter towards SSW direction as per Google earth EMP submitted
18	Nearest Rail Station	: Jorashankh Halt, approx. 8.11 km towards East direction.
19	Nearest Air Port	: Deoghar Airport approx. 67.19 km towards ENE direction.
20	Road & Highways	: SH-13 approx 13.84 km, ENE direction
21	Approach Road	: approx, 370 meters

22	Cluster Certificate	:	There are two other mine exists within 500m radius. Total cluster area is 5.12 acre or 2.07ha as per DMO, Giridih, vide letter no. 187/Khanan Giridih dated 10.03.2026
23	Nearest Forest	:	The distance of reserved / protected forest is 400 meters from proposed project site as per Divisional Forest Officer, Giridih west , vide letter no.:841 dated 31.05.2025
24	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 34.16 KM from the nearest Eco Sensitive Zone of Topchanchi Wildlife Sanctuaries.

CO-ORDINATES

Point	Latitude	Longitude
P1	24° 17' 54.07" N	86° 03' 52.85" E
P2	24° 17' 54.42" N	86° 03' 52.71" E
P3	24° 17' 54.48" N	86° 03' 52.85" E
P4	24° 17' 54.99" N	86° 03' 52.30" E
P5	24° 17' 55.15" N	86° 03' 52.42" E
P6	24° 17' 55.36" N	86° 03' 54.94" E
P7	24° 17' 55.60" N	86° 03' 56.74" E
P8	24° 17' 54.38" N	86° 03' 56.74" E
P9	24° 17' 54.51" N	86° 03' 53.80" E

LAND DETAILS

Khata no.	Plot no.
5 & 7	405, 404, 406 & 407

STATUTORY CLEARANCES

1	LOI/Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Office, Giridih vide letter no. 160/M dated 26.02.2026.
2	CO	:	The CO, Birni (Giridih) vide letter no. 270, dated 12.03.2025 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in Khatyan and also mentioned that the Nadi within 500 meter of proposed project site, accordingly PAs has submitted EMP for the same. During the appraisal it was seen from the KML that few houses exists at a distance of 340 meters and Barsati Nala exists within 500 meter from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.

3	DMO Cluster	:	DMO, Giridih vide memo no. 187/Khanan, dated 10.03.2026 certified that 02 other mining lease area (2.01 Acre & 2.30 Acre) exists within 500 m radius from proposed project site and total area is 5.12 Acre.
4	DFO Wild Life	:	Divisional Forest Officer, Wildlife Division, Hazaribag vide letter no. 527, dated 29.03.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	DFO, Giridih West Forest Division vide letter no. 841, dated 31.05.2025 certified that the distance of reserved / protected forest is 400 meters from proposed project site.
6	DSR	:	During appraisal of this project, it was seen that the Village Karma, Block : Birni was found to be mentioned as a potential village in Zone – 3 of approved DSR of Giridih District. Whereas DC, Giridih vide letter no. 418/M, dated 29.05.2026 has stated that project should be considered part of DSR. On the basis of the fact that this project has been mentioned in approved DSR as a potential village in Zone- 3. This project is being taken for appraisal.
7	Gram Sabha	:	BDO, Birni vide letter no. 292, dated 28.03.2025 informed that Gram Sabha conducted on 18.03.2025.
8	Mine Plan Approval	:	Approved by The Assistant Director, Geology, District Geological Office, Bokaro vide Memo No. 87, dated 30.04.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer –cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/48/2026 /3169, dated : 19.08.2026.
10	Qualified Person	:	Shri Tapan Kumar Chakravarty through e-mail dated 26.08.2026 affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Opencast semi- mechanized Method
2	Quarry Area	:	0.12 Ha
3	Waste Generation	:	4553.10 cum

4	Stripping Ratio	:	1:0.04
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m
7	Elevation of Mine	:	301 m AMSL to 298 m AMSL
8	Ground Level Elevation	:	298 m AMSL
9	Ultimate Working Depth	:	288 m AMSL (10mbgl)
10	Water Table	:	267- 270m AMSL (28-31 mbgl)
11	Topography of Mine	:	Area represents gently sloping.
12	Explosive Requirement	:	2kg/day
13	Diesel/Fuel requirement	:	120 litre/day

Production Details

Year	Production of Stone in cum	Production of Stone in tones	Waste (cum) in Plan Period	Waste (cum) in ultimate
1st	8692.50	23469.75	(840+457.50)=1297.50	2459.40
2nd	8892.00	24008.40	(1500 + 468.00)= 1968.00	
3rd	8344.80	22530.96	439.20	
4th	8139.60	21976.92	428.40	
5th	7980.00	21546.00	420.00	
Total	42048.90	113532.03	4553.10	2459.40

Land Use

Land Utilization	Existing (Ha)	Plan period(Ha)	Conceptual stage (Ha)
Quarry	0.03	0.12	0.12
Mine Road	0.0	0.0	0.0
Safety Zone	0.0	0.20	0.20
Total	0.03	0.32	0.32
Unused Area	0.29	-	-
Lease area	0.32		

Green Belt Development

	Area / Length	Number of Trees	Remarks	Timeline	Species
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Area in Safety Zone (Ha.)	0.20	320	1600 Tree per Hectare	1st Year	Pipal, Gulmohar Jackfruits, Mango, Jamun, Babul, Neem, Arjun, etc.
Length of Approach Road Area (m.)	370	740	2m X 2 m spacing in two rows both side		
Total		1060			

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

BUDGETARY PROVISION (IN LAKHS)

PROJECT COST

Particulars			Capital(Rs.)	Recurring(Rs.)
Land			8,10,000.00	81,000.00
Infrastructure			1,20,000.00	12,000.00
Mining Equipment			0.00	29,00,000.00
Equipment	Quantity	Rent per year		
Excavator	1	4,00,000		
Rock Breaker	1	2,00,000		
Compressor	1	10,00,000		
Water Sprinkler	1	6,00,000		
Dumper	2	4,00,000		
Loader	1	3,00,000		
@Per rock breaker - 2,00,000/- @Per Excavator-4,00,000/- @Per Compressor-10,00,000/- @Per Water Sprinkler -6,00,000/- @Per Dumper-2,00,000/- @Per Loader-3,00,000/-				
Water Facility for Domestic Purpose "0.27" KLD (Annual Water Demand "81"KL @4L per Tanker, total number of tanker required ("21") and per tanker cost @Rs. 500)			0.00	10,500.00
Statutory Clearances			2,00,000.00	0.00
Mine Closure Cost for fencing around mine			1,30,000.00	0.00
Environment Management Plan (EMP) Cost			5,48,000.00	5,75,000.00
Total			21,08,000.00	35,78,500.00

ENVIRONMENT MANAGEMENT PLAN (EMP)

Particulars	Capital	Recurring
1060 Tree Plantation @Rs.300 per Tree for planting & @Rs.50 per tree for maintenance	3,18,000	53,000
Water Tanker @Rs. 500 per Tanker for Dust Suppression (2.49 KLD) & Horticulture (6.36 KLD) 2.49+ 6.36 = 8.85 KLD 8.85 KLD X 300 Days = 2655KLD 2655KLD / 4 KLD = 664 Tankers	0	3,32,000
Environment Monitoring & Compliance	0	50,000
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF & CC	1,30,000	40,000
Garland Drain & Retaining wall	4,00,000	1,00,000
Total	8,48,000	5,75,000

Environment Monitoring Plan

Monitoring Parameters and Frequency of Monitoring

S. no.	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 stations	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	Total 4553.10 cum waste generated during this Mining Plan period and 2459.00 cum in ultimate stage which is used for village & haul road maintenance, so there is no requirement of waste dumping Plan for this mining plan.
Air Quality Management	- Wet drilling and use of sharp drill bits to minimize dust generation. - Controlled blasting using optimum explosive charge during favorable weather conditions.

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	• Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support.

	• Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation.

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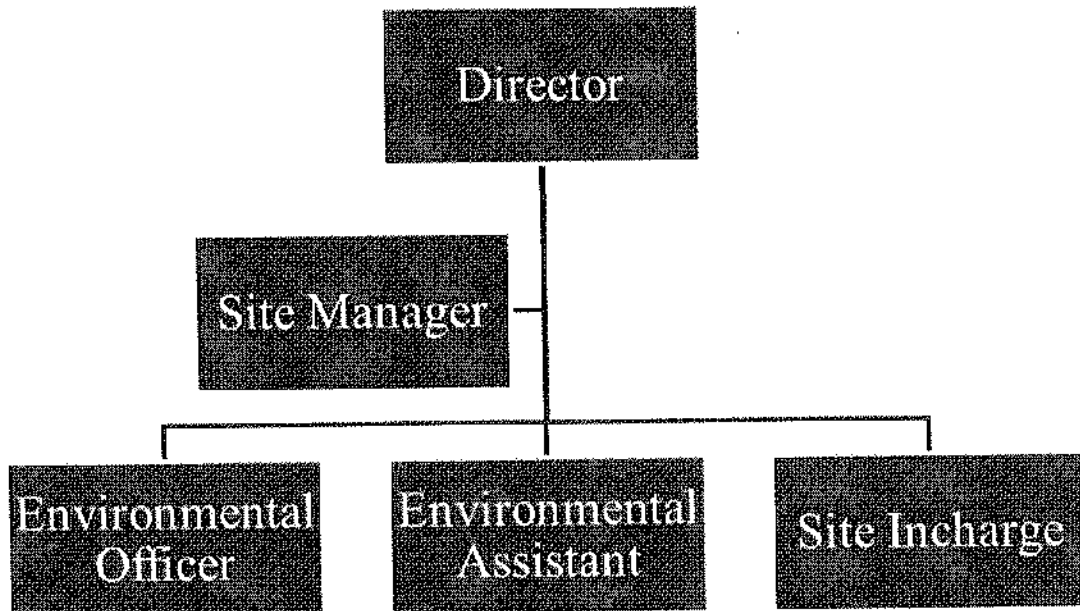
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The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
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- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.

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Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Stone Deposit of M/s Karma Stone (Partners : Shri Manoj Mehta & Shri Santosh Mehta), Village : Karma, Thana : Birni, Distt. : Giridih, Jharkhand (0.32 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/48/2026 /3169, dated : 19.08.2026 is also included as Annexure – I (L) :

- I. During appraisal of this project, it was seen that the Village Karma, Block : Birni was found to be mentioned as a potential village in Zone – 3 of approved DSR of Giridih District. Whereas DC, Giridih vide letter no. 418/M, dated 29.05.2026 has stated that project should be considered part of DSR. On the basis of the fact that this project has been mentioned in approved DSR as a potential village in Zone- 3. This project is being taken for appraisal and it is being recommended for EC with condition that while granting lease, DC, Giridih will verify the aforesaid fact from the approved DSR of Giridih District.
- II. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- III. Suitable precautionary measures are to be taken to prevent any adverse effects on the nearby seasonal Nala due to the mining activities.
- IV. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign “Ek Ped Ma Ke Naam” and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- V. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a

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- VI. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- VII. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VIII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- IX. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- X. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- XI. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

15. Ulatu Stone Mine of M/s J.P.L Enterprises (Prop. : Shri Niraj Kumar Singh), Village : Ulatu, Tehsil : Namkum, Distt. : Ranchi, Jharkhand (2.327 Ha).

(Proposal no.: SIA/JH/MIN/ 527456 /2025)

Name of the consultant : Crystal Cosultants, Ranchi, Jharkhand.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC) (re-appraisal of Environment Clearance issued by DEIAA, Ranchi).

The project has been granted EC by DEIAA, Ranchi vide letter no. EC/DEIAA/ 2016-17/ 85/98, dated 26.08.2017 having capacity of 535.50 Tonnes per day.

As per O.M. dated 28th April 2023 issued by MOEF & CC projects which have been granted EC by DEIAA are to be reappraised by SEIAA / SEAC.

This is re-appraisal of the EC issued by DEIAA, Ranchi which has been taken up for consideration on 26.08.2026. As per O.M. dated 12.12.18 issued by MOEF & CC projects fall in category B2.

Existing baseline condition as per monitoring report submitted by PP is as follows PM₁₀ - 72.6 µg/m³ PM_{2.5} - 31.2 µg/m³ SO₂ - 11.3 NO_x - 24.0 µg/m³ All the data are within the permissible limit. Data generated by JSPCB empaneled Laboratory has been also submitted by PP.

Dust suppression is being carried out on regular basis.

Greenbelt Developed.

As per compliance report of JSPCB regarding previous EC, plantation has been done in safety zone.

Production detail as per memo no. 16/M dated 07.01.2025 by DMO, Ranchi is within the permissible limit of EC.

The compliance report of previous EC has been issued by Member Secretary, JSPCB, Ranchi vide letter no. 2183, dated 06.07.2026.

The SEAC has found that the certification of the compliance of the conditions of previous EC is not appropriate regarding status of execution of compliance as no details have been provided. Hence, the Committee decided to obtain a self certified compliance report along with the supporting details as evidence of execution.

The self certified compliance report has been submitted and also presented before the Committee.

EC Application for: Proposed Capacity-160466 TPA or 59,431.85 cum

Project and Location Details:

Sl	Parameter	Details	
1	Project Name	Ulatu Stone Mine	
2	Lessee:	M/s J.P.L. Enterprises Proprietor - Sri Niraj Kumar Singh	
3	Lessee Address	At - B - 201, Vainandini Apartment, Sadabahar Chowk, Namkum, Ranchi, Jharkhand	
4	Lease Area	2.327 Ha	Acres- 5.75 Acre
5	Type of Land	Non-Forest Raiyati Land	
6	Project Cost	Capital: 2596200.00	
7	EMP Budget	Capital: 705500.00	Recurring: 856070.00
8	New or Expansion	Re-appraisal of DEIAA EC	
9	Mineable Reserves	2,99,225.18 Cum	807908 tonnes
10	Mine Life	As per the lease period i.e. 08.02.2018 to 07.02.2028	
11	Man power	21	
12	Water	19.60KLD (Drinking: 0.84KLD, Industrial: 9.46KLD, Plantation:	

	Requirement	9.31KLD)
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: -
15	Crusher	: No crusher
16	Nearest Water Body	: Sapahi river is situated at a distance of 6.1 kmin North- Western direction.
17	Nearest Habitation	: Ulatu Basti, at a distance of 1.17Km in S-E direction.
18	Nearest Rail Station	: Gangaghat station, approx. 11.1km from the lease area
19	Nearest Air Port	: Birsa Munda Airport, Ranchiat a distance of 20.4 km from the lease area
20	Nearest Forest	: Divisional Forest Officer, Ranchi vide letter no.: 2685, dated 04/10/2016 certified that the distance of reserved / protected forest is more than 650meter from proposed project site.
21	Wildlife	: The project location is at approx. 35.8 KM from the nearest Bhagwan Birsa Mrig Vihar wildlife sanctuary.
22	Road & Highways	: NH-43 at a distance of 2.7 Km from applied lease area.
23	Approach Road	: At a distance of about 260 meters

CO-ORDINATES

Sl. No.	Latitude	Longitude	Sl. No.	Latitude	Longitude
1	23°15'29.2033"	85°29'07.1799"	31	23°15'23.1017"	85°29'01.4875"
2	23°15'28.3099"	85°29'07.0842"	32	23°15'23.9372"	85°29'01.5733"
3	23°15'27.5491"	85°29'07.0839"	33	23°15'24.5216"	85°29'01.3918"
4	23°15'26.5266"	85°29'06.9471"	34	23°15'25.1565"	85°29'01.0410"
5	23°15'25.0376"	85°29'05.1623"	35	23°15'25.4671"	85°29'01.2168"
6	23°15'24.8863"	85°29'05.3020"	36	23°15'25.5502"	85°29'01.3182"
7	23°15'24.7226"	85°29'05.5583"	37	23°15'25.1119"	85°29'02.7444"
8	23°15'24.4532"	85°29'05.5499"	38	23°15'25.1143"	85°29'02.9883"
9	23°15'24.3018"	85°29'05.6869"	39	23°15'25.3638"	85°29'03.3259"
10	23°15'24.1674"	85°29'05.8660"	40	23°15'25.6896"	85°29'03.1888"
11	23°15'23.9875"	85°29'05.8519"	41	23°15'25.9439"	85°29'02.9977"
12	23°15'23.5897"	85°29'05.6847"	42	23°15'25.7239"	85°29'02.5126"
13	23°15'23.3447"	85°29'05.4969"	43	23°15'25.7886"	85°29'02.1179"
14	23°15'23.0955"	85°29'05.2023"	44	23°15'25.9283"	85°29'01.9113"
15	23°15'23.0291"	85°29'04.4383"	45	23°15'26.3836"	85°29'01.7793"
16	23°15'23.0101"	85°29'03.5337"	46	23°15'26.7625"	85°29'01.7394"
17	23°15'24.0663"	85°29'02.7900"	47	23°15'27.2924"	85°29'02.0374"
18	23°15'24.2356"	85°29'02.6193"	48	23°15'27.4790"	85°29'02.3541"
19	23°15'24.3253"	85°29'02.4734"	49	23°15'27.8883"	85°29'02.3681"
20	23°15'24.3421"	85°29'02.3550"	50	23°15'28.3248"	85°29'02.2261"

21	23°15'24.2773"	85°29'02.2200"	51	23°15'29.0724"	85°29'01.8951"
22	23°15'24.1910"	85°29'02.1346"	52	23°15'29.1799"	85°29'01.9849"
23	23°15'23.9406"	85°29'02.1235"	53	23°15'29.3074"	85°29'03.2903"
24	23°15'23.3579"	85°29'02.3773"	54	23°15'29.2872"	85°29'03.8628"
25	23°15'23.2253"	85°29'02.3977"	55	23°15'29.0116"	85°29'04.1115"
26	23°15'22.9212"	85°29'02.3562"	56	23°15'28.8621"	85°29'04.3170"
27	23°15'22.7203"	85°29'02.3519"	57	23°15'28.7277"	85°29'04.4689"
28	23°15'22.3821"	85°29'02.6327"	58	23°15'28.8113"	85°29'04.7403"
29	23°15'22.3422"	85°29'02.3105"	59	23°15'28.9331"	85°29'04.8229"
30	23°15'22.3793"	85°29'01.9288"	60	23°15'29.1782"	85°29'04.9024"

LAND DETAILS

Khata no.	Plot no.
500	11716

STATUTORY CLEARANCES

1	LOI / Lease docs	:	i. The Letter of Intent (LoI) has been issued by AMO, Ranchi vide letter no. 1554/M, dated 17.11.2016. ii. Lease deed : 08.02.2018 to 07.02.2028.
2	CO	:	The CO, Namkum, Ranchi vide letter no. 1055 (ii), dated 11.08.2016 and letter no. 724(ii), dated 29.04.2025 have mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatyan & Register II.
3	DMO	:	DMO, Ranchi vide memo no. 977/M, dated 12.08.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO, Wildlife Division, Ranchi vide letter no. 966, dated 05.12.2024 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	:	Division Forest Officer, Ranchi Forest Division vide letter no. 2685, dated 04.10.2016 certified that the distance of forest land is 650 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Ranchi District (Sl. no. 53, Page no. 38).
7	Gram Sabha	:	Gram Sabha conducted on 04.08.2016.
8	Mining Scheme / Mine Plan	:	i. Mining plan approved by Deputy Director, Mines, Ranchi

	Approval		vide letter no. 416, dated 24.07.2017. ii. Mining scheme approved by DMO, Ranchi vide memo no. 226/M, dated 17.02.2025.
9	Previous EC	:	Previous EC granted by DEIAA, Ranchi vide letter no. EC/DEIAA/2016-17/ 85/98, dated 26.08.2017.
10	Compliance report of EC	:	The compliance report of previous EC has been issued by Member Secretary, JSPCB, Ranchi vide letter no. 2183, dated 06.07.2026.
11	Production Report	:	Production report issued by DMO, Ranchi vide memo no. 16/M dated 07.01.2025.
12	Consent to Establish (CTE)	:	CTE issued by JSPCB vide Ref. no. JSPCB/HO/RNC/CTE-2367607/2018 /838, dated 14.08.2018.
13	Consent to Operate (CTO)	:	CTO issued by JSPCB vide ref. no. JSPCB/RO/RNC/CTO-8037648/2020/74, dated 18.05.2020.
14	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mining scheme has been prepared by him.

Working Details

1	Mining Method	:	Opencast other than fully mechanized (OTFM) Method
2	Quarry Area	:	1.667 Ha Life of Mine – As per the lease period i.e. 08.02.2018 to 07.02.2028.
3	Waste Generation	:	19772 cum
4	Stripping Ratio	:	1:0.04
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m and 5 in number
7	Elevation of Mine	:	608 m AMSL to 600m AMSL
8	Ground Level Elevation	:	600m AMSL
9	Ultimate Working Depth	:	579m AMSL
10	Water Table	:	570m AMSL.
11	Topography of Mine	:	Area represents gently sloping land.
12	Explosive Requirement	:	67kg/day
13	Diesel/Fuel requirement	:	320litre/day

Production Details

Year	Production of Stone in Tonnes	Production of Stone in cum	Overburden in cum	Intercalated waste in cum	Total waste in cum
1 st	160466.40	59,432	10400.00	3128.00	13528.00
2 nd	159850.80	59,204	0.00	3116.00	3116.00
3 rd	160466.40	59,432	0.00	3128.00	3128.00
Total	480783.60	1,78,068	10400.00	9372.00	19772.00

Land Use

Pattern of Utilization	Existing Land Use (Ha)	At the end of Scheme period (Ha)	Land use pattern after life of the mine (in Ha)
Excavation	0.039	1.129	1.667 (0.116 ha area shall be backfilled, 0.437 ha area shall be converted in to water reservoir & 1.114 ha area shall be left as dead bench)
Road	0.014	0.020	0.00
Waste Dump	0.0	0.297	Nil (waste dump to be removed & backfilled)
Infrastructure (Crusher)	0.00	0.00	0.00
S.Z. Plantation	0.0	0.660	0.660
Total	0.053	2.106	2.327
Unused Area	2.274	0.221	0.00
Leasehold Area	2.327	2.327	2.327

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.660	1056	1600 tree per hectare	1st Year
Approach Road	260	520	2m X 2m spacing	1st year
Dead Bench	1.114	1783	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.116	186	1600 tree per hectare	End of Mine
TOTAL		3545		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species				

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipment's needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below:

Budgetary Provision (in Lakhs) of Project Cost				
Particulars			Capital	Recurring
Land			0.00	143753.33
Infrastructure			700000.00	0.00
Mining Equipment			0.00	7200000.00
Equipment	Quantity	Rent per year		
Dumper	2	2000000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.84" KLD (Annual Water Demand "252"KL @4L per Tanker, total number of tanker required ("63") and per tanker cost @Rs. 500)			0.00	31500.00
Statutory Clearances			500000.00	0.00
Mine Closure Cost for Plantation of "1969" number of tree @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance			590700.00	0.00
Mine Closure Cost for fencing around mine			100000.00	0.00
Environment Management Plan (EMP) Cost			705500.00	856070.00
Total			2596200.00	8231323.33

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "1576" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	472800.00	78800.00
Water Facility for Horticulture "9.456" KLD & Dust Suppression "9.308" KLD (Annual Water Demand "5629.2"KL @4L per Tanker, total number	0.00	704000.00

of tanker required ("1408") and per tanker cost @Rs. 500)		
Garland Drain & Desiltation Pond	232700.00	23270.00
Environment Monitoring & Compliance	0.00	50000.00
Total	705500.00	856070.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

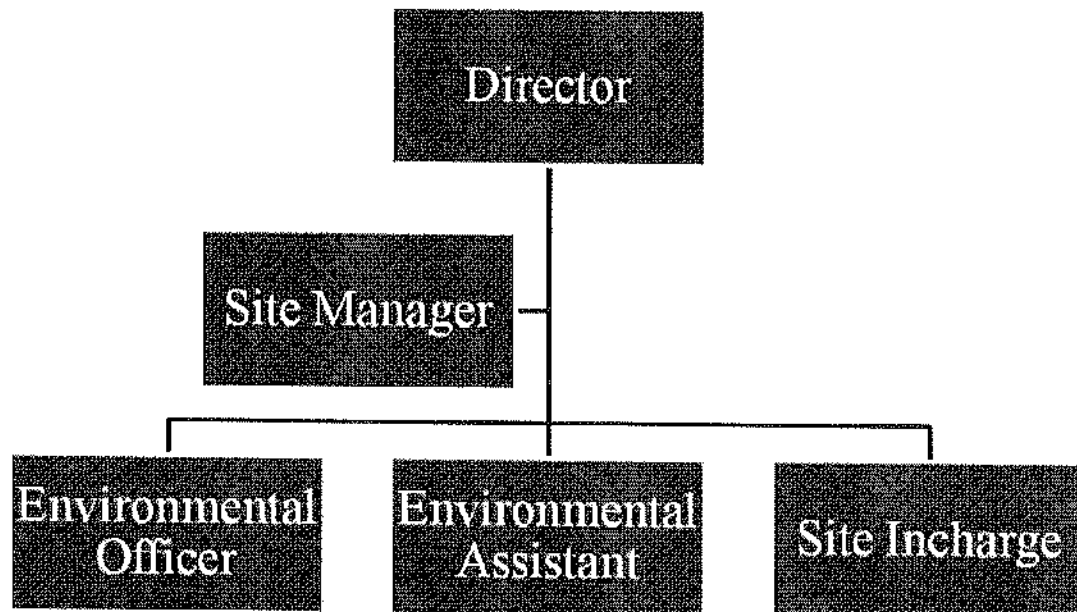
Aspect	Mitigation Measures / Control Measures
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural

	drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	

		Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and

	other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required).

	To avoid danger while reversing the vehicles especially at working place/loadingpoints, stopper should be posted to properly guide reversing/spotting operating.
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EMP Cell structure

- The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.

- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ulatu Stone Mine of M/s J.P.L Enterprises (Prop. : Shri Niraj Kumar Singh), Village : Ulatu, Tehsil : Namkum, Distt. : Ranchi, Jharkhand (2.327 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. The production shall be restricted as per approved mining scheme or the approved mine plan at the time of EC, which ever is less.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>).10% of the total green belt proposed shall be allocated under this clause.
- III. During appraisal of the project, it is seen that the project authority have not fully complied the condition of green belt development as per the previous EC. Hence, the project authorities are required to plant twice the number of trees as was required in the previous EC.The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone.Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only.Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests . Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

16. Ulatu Stone Mine of Shri Niraj Kumar Singh, Village : Ulatu, Tehsil : Namkum, Distt. : Ranchi, Jharkhand (2.77 Ha).

(Proposal no.: SIA/JH/MIN/ 527001 /2025)

Name of the consultant : Crystal Cosultants, Ranchi, Jharkhand.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC) (re-appraisal of Environment Clearance issued by DEIAA, Ranchi).

The project has been granted EC by DEIAA, Ranchi vide letter no. EC/DEIAA/ 2016-17/ 86/97, dated 26.08.2017 having capacity of 125.37 Tonnes per Day.

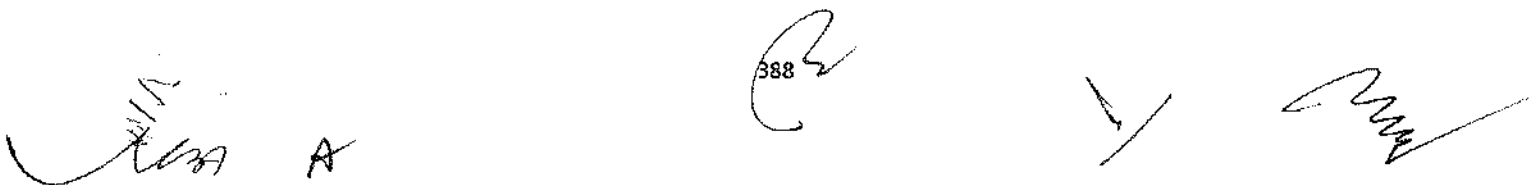
As per O.M. dated 28th April 2023 issued by MOEF & CC projects which have been granted EC by DEIAA are to be reappraised by SEIAA / SEAC.

This is re-appraisal of the EC issued by DEIAA, Ranchi which has been taken up for consideration on 26.08.2026. As per O.M. dated 12.12.18 issued by MOEF & CC projects fall in category B2.

Existing baseline condition as per monitoring report submitted by PP is as follows PM10 - 72.6µg/m³ PM 2.5 – 31.2 µg/m³ SO₂- 11.3 NO_x- 24.0 µg/m³ . All the data are within the permissible limit. Data generated by JSPCB empaneled Laboratory has been also submitted by PP. All the data are within prescribed limit.

Dust suppression is being carried out on regular basis.

Greenbelt Developed.

The bottom of the page features several handwritten signatures and initials. On the left, there is a signature that appears to be 'VIA' followed by a large 'A'. In the center, there is a circular stamp with the number '388' and a signature. To the right of the stamp, there is a checkmark and another signature.

As per compliance report of JSPCB regarding previous EC, plantation has been done in safety zone.

Production detail as per memo no. 19/M dated 07.01.2025 by DMO, Ranchi is within the permissible limit of EC.

The compliance report of previous EC has been issued by Member Secretary, JSPCB, Ranchi vide letter no. 2255, dated 14.07.2026.

The SEAC has found that the certification of the compliance of the conditions of previous EC is not appropriate regarding status of execution of compliance as no details have been provided. Hence, the Committee decided to obtain a self certified compliance report along with the supporting details as evidence of execution.

The self certified compliance report has been submitted and also presented before the Committee.

EC Application for: Proposed Capacity-13899 Cum per year or 37526 TPA

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Ulatu Stone Mine
2	Lessee:	: M/s J.P.L. Enterprises Proprietor – Sri Niraj Kumar Singh
3	Lessee Address	: At – B – 201, Vaindani Apartment, Sadabahar Chowk, Namkum, Ranchi, Jharkhand
4	Lease Area	: 2.77 Ha Acres- 6.86 Acre
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Capital: 3330000.00
7	EMP Budget	: Capital: 1795100.00 Recurring: 1068550.00
8	New or Expansion	: Re-appraisal of DEIAA EC
9	Mineable Reserves	: 175034 cum 472591 tonnes
10	Mine Life	: As per the lease period i.e. 08.02.2018 to 07.02.2028.
11	Man power	: 31
12	Water Requirement	: 22.68KLD (Drinking: 1.24KLD, Industrial:10.36KLD, Plantation: 11.08KLD)
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: -
15	Crusher	: No crusher
16	Nearest Water Body	: Sapahi river is situated at a distance of 5.95 kmin North-Western direction.
17	Nearest Habitation	: Ulatu Basti, at a distance of 247.5 m in S-W direction.
18	Nearest Rail Station	: Tatisilway station, approx. 13.1km from the lease area

19	Nearest Air Port	:	Birsa Munda Airport, Ranchiat a distance of 20.2 km from the lease area
20	Nearest Forest	:	Divisional Forest Officer, Ranchi vide letter no.: 2767, dated 07/10/2016 certified that the distance of reserved / protected forest is more than 400meter from proposed project site.
21	Wildlife	:	The project location is at approx. 35.5 KM from the nearest Bhagwan Birsa Mrig Vihar wildlife sanctuary.
22	Road & Highways	:	NH –33 at a distance of 2.0 Km from S-W direction.

CO-ORDINATES

Sl. No.	Latitude	Longitude
1	23°15'25.5300"	85°28'29.2636"
2	23°15'24.5759"	85°28'32.4593"
3	23°15'22.7912"	85°28'34.4384"
4	23°15'20.7878"	85°28'31.9985"
5	23°15'17.9959"	85°28'32.61.53"
6	23°15'18.6224"	85°28'27.5258"
7	23°15'20.7780"	85°28'25.5301"
8	23°15'23.7036"	85°28'24.3857"
9	23°15'22.9728"	85°28'25.7306"
10	23°15'23.9834"	85°28'26.0303"
11	23°15'21.9605"	85°28'27.6558"
12	23°15'21.0184"	85°28'29.4951"
13	23°15'23.1530"	85°28'29.6880"
14	23°15'24.3872"	85°28'28.7543"

LAND DETAILS

Khata no.	Plot no.
500	11590

STATUTORY CLEARANCES

1	LOI / Lease docs	:	iii. The Letter of Intent (LoI) has been issued by AMO, Ranchi vide letter no. 1556/M, dated 17.11.2016. iv. Lease deed : 08.02.2018 to 07.02.2028.
2	CO	:	The CO, Namkum, Ranchi vide letter no. 1053 (ii), dated 11.08.2016 and letter no. 711 (ii), dated 26.04.2025 have mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyani & Register II. During the appraisal it was

		seen from the KML that few houses exists within 500 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO	DMO, Ranchi vide memo no. 979/M, dated 12.08.2026 certified that 01 other mining lease area (3.33 Acre) exists within 500 meters radius from proposed project site and total area is 10.19 Acre.
4	DFO Wild Life	DFO, Wildlife Division, Ranchi vide letter no. 963, dated 05.12.2024 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	Division Forest Officer, Ranchi Forest Division vide letter no. 2767, dated 07.10.2016 certified that the distance of forest land is 400 meters from proposed project site.
6	DSR	This project is mentioned in approved DSR of Ranchi District (Sl. no. 12, Page no. 33).
7	Gram Sabha	Gram Sabha conducted on 04.08.2016.
8	Mining Scheme / Mine Plan Approval	Mining scheme approved by AMO, Ranchi vide Memo no. 683/M, dated 22.08.2022.
9	Previous EC	Previous EC granted by DEIAA, Ranchi vide letter no. EC/DEIAA/2016-17/-86/97, dated 26.08.2017.
10	Compliance report of EC	The compliance report of previous EC has been issued by Member Secretary, JSPCB, Ranchi vide letter no. 2255, dated 14.07.2026.
11	Production Report	Production report issued by DMO, Ranchi vide memo no. 19/M dated 07.01.2025:
12	Consent to Establish (CTE)	CTE issued by JSPCB vide Ref. no. JSPCB/HO/RNC/CTE-2367491/2018 /843, dated 14.08.2018.
13	Consent to Operate (CTO)	CTO issued by JSPCB vide ref. no. JSPCB/RO/RNC/CTO-19027398/2024/71, dated 27.05.2024.
14	Qualified Person	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mining scheme has been prepared by him.

Working Details

1	Mining Method	:	Opencast other than fully mechanized (OTFM) Method
2	Quarry Area	:	1.997 Ha Life of Mine – As per the lease

			period i.e. 08.02.2018 to 07.02.2028.
3	Waste Generation	:	42020 cum
4	Stripping Ratio	:	1:0.02
5	Working Days	:	300
6	Bench: size & No	:	6m to 6mand 4 in number
7	Elevation of Mine	:	608 m AMSL to 591m AMSL
8	Ground Level Elevation	:	591m AMSL
9	Ultimate Working Depth	:	585m AMSL
10	Water Table	:	571m AMSL.
11	Topography of Mine	:	Area represents gently sloping land.
12	Explosive Requirement	:	16kg/day
13	Diesel/Fuel requirement	:	75litre/day

Production Details

Year	Production of Stone in Tonnes	Production of Stone in CuM	Overburden in cum	Intercalated waste in cum	Total waste in cum
1 st	37477.22	13,880.45	3800.00	292.22	4092.22
2 nd	37525.95	13,898.5	0.00	292.60	292.60
3 rd	37492.09	13,885.95	0.00	292.34	292.34
4 th	37469.52	13,877.6	0.00	292.16	292.16
5 th	37498.86	13,888.46	3696.00	292.39	3988.39
Total	187463.64	69430.96	7496.00	1461.71	42020.06

Land Use

Pattern of Utilization	Existing Land Use (Ha)	At the end of Scheme period (Ha)	Land use pattern after life of the mine (in Ha)
Quarry	0.854	1.675	1.997 (0.151ha area shall be backfilled, 1.508ha area shall be converted in to water reservoir & 0.338ha area shall be dead bench)
Road	0.017	0.004	0.004
Waste Dump	Nil	0.322	Nil (waste dump to be removed & backfilled)

S.Z. Plantation	Nil	0.734	0.734
Total	0.870	2.735	2.735
Unused Area	1.900	0.035	0.035
Leasehold Area	2.77	2.77	2.77

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.734	1175	1600 tree per hectare	1st Year
Approach Road	276	552	2m X 2m spacing	1st year
Dead Bench	0.338	541	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.151	242	1600 tree per hectare	End of Mine
TOTAL		2510		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus& other Native Species				

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipment's needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below:

Budgetary Provision (in Lakhs) of Project Cost				
Particulars			Capital	Recurring
Land			0.00	171120.21
Infrastructure			700000.00	0.00
Mining Equipment			0.00	5200000.00
Equipment	Quantity	Rent per year		
Dumper	1	2000000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		

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Water Facility for Domestic Purpose "1.24" KLD (Annual Water Demand "372"KL @4L per Tanker, total number of tankers required ("93") and per tanker cost @Rs. 500)	0.00	46500.00
Statutory Clearances	500000.00	0.00
Mine Closure Cost for Plantation of "783" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	234900.00	0.00
Mine Closure Cost for fencing around mine	100000.00	0.00
Environment Management Plan (EMP) Cost	1795100.00	1068550.00
Total	3330000.00	6486170.21

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "1727" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	518100.00	86350.00
Water Facility for Horticulture "10.362" KLD & Dust Suppression "11.08" KLD (Annual Water Demand "6432.6"KL @4L per Tanker, total number of tankers required ("1609") and per tanker cost @Rs. 500)	0.00	804500.00
Garland Drain & Desiltation Pond	277000.00	27700.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA.II (M) dated 29/10/2014 issued by MoEF& CC	1000000.00	100000.00
Environment Monitoring & Compliance	0.00	50000.00
Total	1795100.00	1068550.00

Environment Monitoring Plan (post operation)

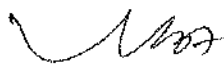
Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly

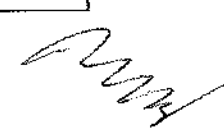
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Air Quality Management	- Wet drilling and use of sharp drill bits to minimize dust generation. - Controlled blasting using optimum explosive charge during favorable weather conditions. - Regular maintenance of diesel equipment and vehicles to reduce emissions. - Water sprinkling on haul roads, loading/unloading points, and working areas. - All transport vehicles will have valid PUC certificates. - Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	- Mining will be confined only above the Ground Water Table (GWT). - Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. - Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. - Garland and foot drains will be constructed around the quarry to control surface runoff. - Sewage from rest shelters will be treated through septic tank-soak pit systems. - Foot drain would be provided around the external dump, if any.
Noise Quality Management	- Mining activities will be restricted to daytime and carried out with controlled blasting techniques. - Acoustic enclosures and mufflers will be provided for drilling and DG set operations. - Regular maintenance of mining machinery to minimize vibration and noise. - Greenbelt development around the lease boundary to attenuate noise propagation. - Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	- Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. - Garland drains and retaining walls will prevent soil erosion and siltation. - Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas - Post-mining, the area will be rehabilitated using stored topsoil and native vegetation







Flora & Fauna management	- No tree felling will be undertaken without obtaining permission from the competent authority. - Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). - Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	- Priority employment to local people in mining and ancillary activities. - Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. - Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	- Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. - All monitoring reports will be submitted to statutory authorities as per the compliance schedule. - Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: - Overall slope angles of benches will be maintained at 45°. - Unmanageable heights are not created. - Loose sides are properly dressed. - No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). - No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) - It will be ensured that the drilling equipment is suitable for the job. - The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. - Provision of portable rail fencing between the drilling operations and the edge of the bench - Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. - Restricted access to the area to all persons except those necessary for the drilling operation. - Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. - In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which

		removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident		▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic.

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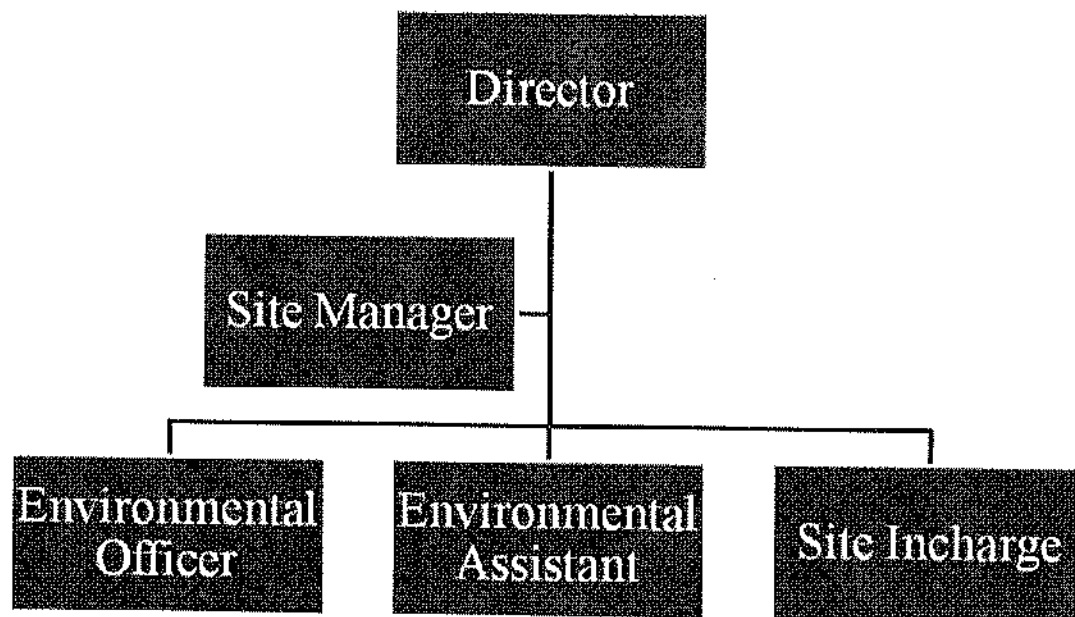
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Prevention	Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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EMP Cell structure

- The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.

- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Ulatu Stone Mine of Shri Niraj Kumar Singh, Village : Ulatu, Tehsil : Namkum, Distt. : Ranchi, Jharkhand (2.77 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. The production shall be restricted as per approved mining scheme or the approved mine plan at the time of EC, which ever is less.
- III. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLIFE Portal (<https://merilife.nic.in>).10% of the total green belt proposed shall be allocated under this clause.
- IV. During appraisal of the project, it is seen that the project authority have not fully complied the condition of green belt development as per the previous EC. Hence, the project authorities are required to plant twice the number of trees as was required in the previous EC. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- V. Suitable plant species of not less than 2 M height to be planted equal to twice the

area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.

- VI. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VII. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- VIII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- IX. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- X. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

17. Hutap Stone Deposit of Smt. Payal Kumari, Village : Hutap, Tehsil : Dumri, Distt. : Gumla, Jharkhand (1.748 Ha).

(Proposal no.: SIA/JH/MIN/ 584123 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 46137 Cum per year or 124569 Tonnes per year

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Hutap Stone Deposit
2	Lessee:	: Smt. Payal Kumari



3	Lessee Address	:	At- House No.- 11 Staff Bank Colony, Telmil, Piska More, Ranchi, Jharkhand	
4	Lease Area	:	1.748 ha.	4.32 acres
	Type of Land	:	Non-Forest Raiyati Land	
6	Project Cost	:	Capital: Rs. 3020200.00	Recurring: 8138864.89 per year
7	EMP Budget	:	Capital: Rs 1573200.00	Recurring: Rs. 794880.00 per year
8	New or Expansion	:	New	
9	Mineable Reserves	:	213044 cum	575219 tonnes
10	Mine Life	:	5 Years	
11	Man power	:	24	
12	Water Requirement	:	15.92 KLD	
13	Water Source	:	By authorised hired water tankers	
14	DG Set / power	:	-	
15	Crusher	:	Yes	
16	Nearest Water Body	:	The Sen River flows at a distance of about 2 km in North-West direction	
17	Nearest Habitation	:	Hutap Village at a distance of 335 meters	
18	Nearest Rail Station	:	Nearest railway station is Lohardaga which at a distance of about 58 km in North-East direction	
19	Nearest Air Port	:	Birsu Munda Airport, Ranchi at a distance of 87 Km in East direction	
20	Nearest Forest	:	Divisional Forest Officer, Gumla certified that the distance of reserved / protected forest is 950 meters from proposed project site.	
21	Nearest Wildlife Sanctuary	:	The project location is at approx. 25 KM from the nearest Palkot wildlife sanctuary.	
22	Road & Highways	:	NH-143B Manora-Mahuadanr Road at about 1.0 Km in West direction.	
23	Approach Road	:	At a distance of 296 metres.	

CO-ORDINATES

POINTS	LATITUDE	LONGITUDE
P1	23° 19' 22.3176" N	84° 09' 18.6942" E
P2	23° 19' 22.1842" N	84° 09' 21.5113" E
P3	23° 19' 21.9032" N	84° 09' 22.7113" E
P4	23° 19' 21.2557" N	84° 09' 24.5462" E
P5	23° 19' 20.0111" N	84° 09' 24.0431" E
P6	23° 19' 19.3997" N	84° 09' 23.8934" E
P7	23° 19' 19.2832" N	84° 09' 24.1727" E
P8	23° 19' 19.2080" N	84° 09' 24.6435" E

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P9	23° 19' 19.4989" N	84° 09' 24.8155" E
P10	23° 19' 19.3863" N	84° 09' 25.4288" E
P11	23° 19' 18.7012" N	84° 09' 25.1035" E
P12	23° 19' 18.3807" N	84° 09' 24.4885" E
P13	23° 19' 18.2547" N	84° 09' 23.5997" E
P14	23° 19' 18.1971" N	84° 09' 22.7085" E
P15	23° 19' 18.0514" N	84° 09' 21.8881" E
P16	23° 19' 17.8809" N	84° 09' 21.2594" E
P17	23° 19' 17.7213" N	84° 09' 20.9669" E
P18	23° 19' 18.0016" N	84° 09' 20.8237" E
P19	23° 19' 18.2634" N	84° 09' 20.4665" E
P20	23° 19' 18.4717" N	84° 09' 19.8303" E
P21	23° 19' 18.4822" N	84° 09' 19.3802" E
P22	23° 19' 18.6894" N	84° 09' 19.4363" E
P23	23° 19' 18.9520" N	84° 09' 19.7630" E
P24	23° 19' 19.4525" N	84° 09' 19.5728" E
P25	23° 19' 20.4648" N	84° 09' 19.2587" E
P26	23° 19' 20.4495" N	84° 09' 19.0812" E
P27	23° 19' 20.7552" N	84° 09' 19.0532" E
P28	23° 19' 21.4870" N	84° 09' 18.7761" E

LAND DETAILS

Khata no.	Plot no.
36	107, 108 & 109

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Deputy Commissioner, Gumla vide letter no. 636/M, dated 25.05.2026.
2	CO	:	The CO, Dumri (Gumla) vide letter no. 29 (ii), dated 11.02.2022 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyon & Register II. During the appraisal it was seen from the KML that few houses exists at a distance of 335 meters and Nala 40 meter from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Gumla vide memo no. 745/M, dated 27.06.2026 certified that 01 other mining lease area (3.02 Acre) exists within 500 meters radius from proposed project site and total area is 7.34 Acre.






4	DFO Wild Life	:	DFO, Wildlife Division, Ranchi vide letter no. 1130, dated 14.12.2021 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Gumla Forest Division vide letter no. 1663, dated 21.05.2026 certified that the distance of notified/demarcated forest is 950 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Gumla District (Page no. 54, Sl. No. 02).
7	Gram Sabha	:	BDO, Dumri vide letter no. 234 (ii), dated 14.03.2024 informed that Gram Sabha conducted on 28.02.2024.
8	Mine Plan Approval	:	Approved by DMO, Gumla vide Letter No. 744/M, dated 27.06.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/79/2026/3171, dated : 19.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	1.288 Ha.
3	Waste Generation	:	26532 cum
4	Stripping Ratio	:	1:0.05
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m and 4 in numbers
7	Elevation of Mine	:	868 m AMSL to 861 m AMSL
8	Ground Level Elevation	:	861 m AMSL
9	Ultimate Working Depth	:	842 m AML
10	Water Table	:	820 m AMSL
11	Topography of Mine	:	The applied lease area represents a small hillock
12	Explosive Requirement	:	52 kg/day
13	Diesel/Fuel	:	249 litre/day

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requirement	
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Production Details

Year	Production of stone in Cum	Production of stone in Tonnes	Overburden in Cum	Intercalated waste in Cum	Total Waste in Cum
1 st Year	40111	108299	186	2111	2297
2 nd Year	40994	110685	558	2158	2716
3 rd Year	42069	113586	8470	2214	10684
4 th Year	43733	118080	1100	2302	3402
5 th Year	46137	124569	5005	2428	7433
Total	213044	575219	15319	11213	26532

Land Use Pattern

Land Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual period (Ha)
Quarry	0.434	1.288	1.288 (0.106 Ha area shall be backfilled, 0.982 Ha converted in to water reservoir & 0.200 Ha shall be left as dead benches)
Waste Dump	Nil	Nil (comes under quarry)	Nil (comes under quarry)
Road	Nil	Nil (comes under quarry)	Nil (comes under quarry)
Crusher	0.00	Nil (0.262 Ha comes under quarry)	Nil
Safety Zone and Nala Barrier Plantation	Nil	0.460	0.460
Total	0.434	1.748	1.748
Unused Area	1.314	0.0	0.0
Total Lease Area	1.748		

ENVIRONMENT MANAGEMENT
Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.460	736	1600 tree per hectare	1st Year
Approach Road	296	592	2m X 2m spacing	1st year
Dead Bench	0.106	170	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.200	320	1600 tree per hectare	End of Mine
TOTAL		1818		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species				

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipment's needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below :

Budgetary Provision (in Lakhs) of Project Cost				
Particulars			Capital	Recurring
Land			0.00	107984.89
Infrastructure			700000.00	0.00
Mining Equipment			0.00	7200000.00
Equipment	Quantity	Rent per year		
Dumper	2	2000000		

Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.96" KLD (Annual Water Demand "288"KL @4L per Tanker, total number of tankers required ("72") and per tanker cost @Rs. 500)			0.00	36000.00
Statutory Clearances			500000.00	0.00
Mine Closure Cost for Plantation of "490" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance			147000.00	0.00
Mine Closure Cost for fencing around mine			100000.00	0.00
Environment Management Plan (EMP) Cost			1573200.00	794880.00
Total			3020200.00	8138864.89

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "1328" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	398400.00	66400.00
Water Facility for Horticulture "7.968" KLD & Dust Suppression "6.992" KLD (Annual Water Demand "4488"KL @4L per Tanker, total number of tankers required ("1122") and per tanker cost @Rs. 500)	0.00	561000.00
Garland Drain & Desiltation Pond	174800.00	17480.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA. II (M) dated 29/10/2014 issued by MoEF & CC	1000000.00	100000.00
Environment Monitoring & Compliance	0.00	50000.00
Total	1573200.00	794880.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project	3 Stations	Six Monthly

	site only.		
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

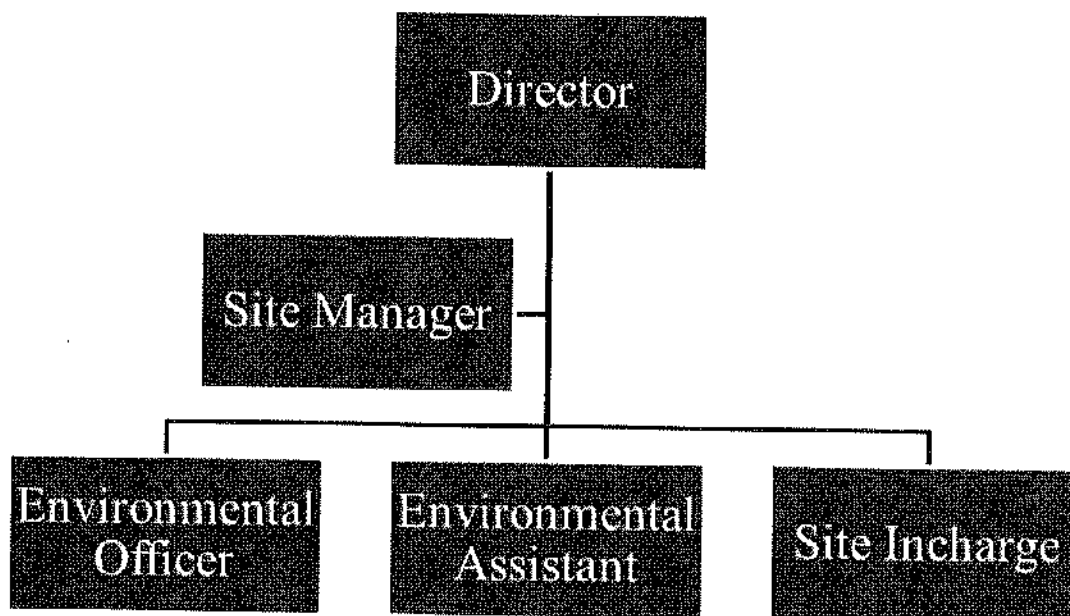
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	During plan period, a total of 26532 cum of solid waste will be generated. This solid waste will be stored in external dump on north eastern side of lease area. At the conceptual stage, all solid waste generated during mining operation will be backfilled
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate

	noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any

		inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept.

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	The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Hutap Stone Deposit of Smt. Payal Kumari, Village : Hutap, Tehsil : Dumri, Distt. : Gumla, Jharkhand (1.748 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer – cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/79/2026/3171, dated : 19.08.2026 is also included as Annexure – I (M) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.>

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- nic.in). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
 - IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
 - V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
 - VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
 - VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
 - VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
 - IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

18. Tolkhar Stone Deposit of Smt. Usha Gupta, Village : Tolkhar, Tehsil : Markacho, Distt. : Koderma, Jharkhand (0.922 Ha).

(Proposal no.: SIA/JH/MIN/ 585345 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 18476 Cum per year or 49884 Tonnes per year

Project and Location Details:

Sl. No.	Parameter	Details
1	Project Name	: Tolkhar Stone Deposit
2	Lessee:	: Smt. Usha Gupta W/o - Sri Rameshwar Prasad Saw
3	Lessee Address	: Village - Mahthadih, P.O + P.S - Domchanch, Dist.-Koderma, Jharkhand
4	Lease Area	: 0.922 Ha 2.28 acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Capital: Rs. 2049500.00 Recurring: Rs. 6589727.70 per year
7	EMP Budget	: Capital: Rs. 644500.00 Recurring: Rs. 704270.00 per year
8	New or Expansion	: New
9	Mineable Reserves	: 167367 cum 451891 tonnes
10	Mine Life	: 10 Years
11	Man power	: 19
12	Water Requirement	: 15.49 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: -
15	Crusher	: Not Proposed
16	Nearest Water Body	: Sakri river at a distance of 1.8 km from lease area on Western direction
17	Nearest Habitation	: Nawadih Village 0.836 Km in South-East direction.
18	Nearest Rail Station	: Nearest railway stations is Nawadih railway station which is about 2.5 Km in North-East direction
19	Nearest Air Port	: Birsa Munda Airport, Ranchi is at a distance of 187 Km in South direction
20	Nearest Forest	: Divisional Forest Officer, Kodarma certified that the distance of reserved / protected forest is 450 meters from proposed project site.
21	Nearest Wildlife Sanctuary	: The project location is at approx. 29.16 KM from the nearest Kodarma wildlife sanctuary.
22	Road & Highways	: SH-13- Koderma- Giridih Road at about 3 Km on Northern direction
23	Approach Road	: At a distance of 722 metres.

CO-ORDINATES

Sl. No.	LATITUDE	LONGITUDE
P1	24°24'20.969"	85°47'34.080"
P2	24°24'20.273"	85°47'34.803"
P3	24°24'19.115"	85°47'35.522"
P4	24°24'18.110"	85°47'36.136"
P5	24°24'17.436"	85°47'34.959"
P6	24°24'16.815"	85°47'33.943"
P7	24°24'17.272"	85°47'33.219"
P8	24°24'18.125"	85°47'32.101"
P9	24°24'18.836"	85°47'31.249"
P10	24°24'19.626"	85°47'32.286"
P11	24°24'20.337	85°47'33.226"

LAND DETAILS

Khata no.	Plot no.
10	01

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Distirct Mining Officer, Koderma vide letter no. 735/M, dated 28.07.2025.
2	CO	:	The CO, Markacho (Koderma) vide letter no. 172, dated 08.03.2025 has mentioned the plot no. of the project is not recorded as "Jungle- Jhari" in R.S. Khatiyar.
3	DMO Cluster	:	DMO, Koderma vide memo no. 686/M, dated 11.07.2026 certified that 01 other mining lease area (1.41 Acre) exists within 500 meters radius from proposed project site and total area is 3.69 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Hazaribag vide letter no. 2428, dated 05.12.2024 certified that the proposed project site is outside Eco Sensitive Zone of Koderma Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Koderma Forest Division vide letter no. 3498, dated 05.12.2024 certified that the distance of notified/demarcated forest is 450 meters from proposed project site.
6	DSR	:	This project is mentioned in approved DSR of Koderma District

Handwritten signatures and initials are present at the bottom of the page, including a large signature on the left, the letter 'A' in the center, a signature with '419' above it in the middle, and another signature on the right.

			(Page no. 43, Sl. No. 14).
7	Gram Sabha	:	BDO, Markacho (Koderma) vide letter no. 1773, dated 19.12.2024 informed that Gram Sabha conducted on 09.12.2024.
8	Mine Plan Approval	:	Approved by The Assistant Director, Geology, District Geological Office, Koderma vide Memo No. 168, dated 26.09.2025.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/72/2026/3173, dated : 19.08.2026.
10	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	0.674 Ha.
3	Waste Generation	:	16723 cum
4	Stripping Ratio	:	1:0.07
5	Working Days	:	300
6	Benchs: size & No	:	6m to 6m and 7 in numbers
7	Elevation of Mine	:	403 m AMSL to 401 m AMSL
8	Ground Level Elevation	:	401 m AMSL
9	Ultimate Working Depth	:	362 m AML
10	Water Table	:	321 m AMSL
11	Topography of Mine	:	The applied lease area represents a small hillock
12	Explosive Requirement	:	21 kg/day
13	Diesel/Fuel requirement	:	100 litre/day

Production Details

Year	Production of stone in Cum	Production of stone in Tonnes	Overburden in Cum	Intercalated waste in Cum	Total Waste in Cum
1 st Year	15512	41881	12272	816	13088
2 nd Year	16104	43482	0	848	848
3 rd Year	16697	45082	0	879	879

4 th Year	17784	48017	0	936	936
5 th Year	18476	49884	0	972	972
Total	84573	228347	12272	4451	16723

Land Use Pattern

Land Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual period (Ha)
Excavation	0.0	0.437	0.674 (0.067 Ha area shall be Backfilled, 0.456 Ha converted in to water reservoir & 0.151 Ha shall be left as dead benches)
Waste Dump	0.0	0.210	Nil (comes under quarry)
Road	0.0	0.015	0.00 (Comes under quarry)
Infrastructure	0.00	0.00	0.00
Safety Zone Plantation	0.0	0.248	0.248
Total	0.0	0.910	0.922
Unused Area	0.922	0.012	0.0
Total Lease Area	0.922		

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.248	397	1600 tree per hectare	1st Year
Approach Road	722	1444	2m X 2m spacing	1st year
Dead Bench	0.151	242	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.067	108	1600 tree per hectare	End of Mine

TOTAL	2191	
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species		

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipment's needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below :

Budgetary Provision (in Lakhs) of Project Cost				
Particulars			Capital	Recurring
Land			0.00	56957.70
Infrastructure			700000.00	0.00
Mining Equipment			0.00	5800000.00
Equipment	Quantity	Rent per year		
Loader	1	600000		
Dumper	1	2000000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.76" KLD (Annual Water Demand "228"KL @4L per Tanker, total number of tanker required ("57") and per tanker cost @Rs. 500)			0.00	28500.00
Statutory Clearances			500000.00	0.00
Mine Closure Cost for Plantation of "350" number of tree @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance			105000.00	0.00
Mine Closure Cost for fencing around mine			100000.00	0.00
Environment Management Plan (EMP) Cost			644500.00	704270.00

	Total	2049500.00	6589727.70
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Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "1841" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	552300.00	92050.00
Water Facility for Horticulture "11.046" KLD & Dust Suppression "3.688" KLD (Annual Water Demand "4420.2"KL @4L per Tanker, total number of tanker required ("1106") and per tanker cost @Rs. 500)	0.00	553000.00
Garland Drain & Desiltation Pond	92200.00	9220.00
Environment Monitoring & Compliance	0.00	50000.00
Total	644500.00	704270.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

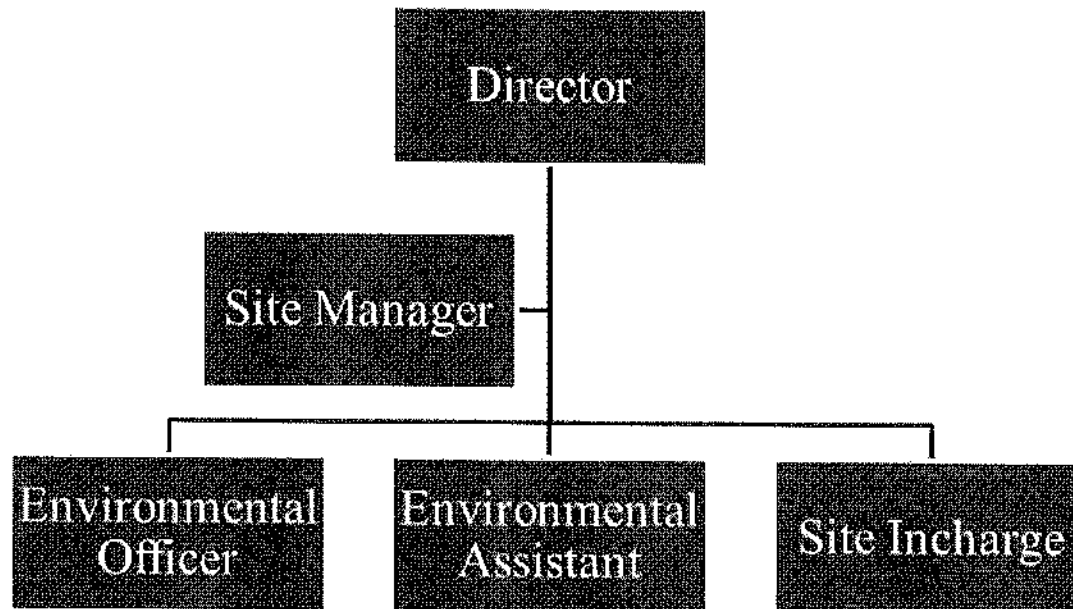
Aspect	Mitigation Measures / Control Measures
Solid Waste	During plan period, a total of 16723 cum of solid waste will be

Management	generated. 50% waste shall be utilized for approach & haul road and 50% solid waste will be stored in external dump on south eastern side of lease area.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation

Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that

	the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up

	to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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EMP Cell structure

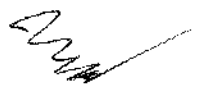
The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.







- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Tolkhar Stone Deposit of Smt. Usha Gupta, Village : Tolkhar, Tehsil : Markacho, Distt. : Koderma, Jharkhand (0.922 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer –cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/72/2026/3173, dated : 19.08.2026 is also included as Annexure – I (N) :

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- III. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- IV. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- V. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests. Summary findings of same to be submitted along with 6 monthly compliance.
- VI. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be

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- maintained and submitted with 6 monthly compliance report.
- VIII. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

19. Sirka Stone Deposit of M/s J.S. Enterprises, Village : Sirka, Tehsil : Karra, Distt. : Khunti, Jharkhand (2.226 Ha).

(Proposal no.: SIA/JH/MIN/ 585791 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity – 122140 Cum per year or 329778 Tonnes per year

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Sirka Stone Deposit
2	Lessee:	: J.S. Enterprises Authorized Person – Sri Sabu K. Sankaran
3	Lessee Address	: At- Ranka Raj, P.O.- Ranka Kalan, District – Garhwa, Jharkhandes
4	Lease Area	: 2.23 Ha. 5.50 Acres
	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Capital: Rs. 33,67,800.00 Recurring: Rs. 20974161.04 per year
7	EMP Budget	: Capital: Rs. 1865600.00 Recurring: Rs. 1095900.00 per year
8	New or Expansion	: New
9	Mineable Reserves	: 6,11,044.81 cum 1649821 Tonnes
10	Mine Life	: 5 Years
11	Man power	: 27
12	Water Requirement	: 22.85 KLD

13	Water Source	:	By authorised hired water tankers
14	DG Set / power	:	-
15	Crusher	:	Not Proposed
16	Nearest Water Body	:	Dhurwa Dam at a distance of 8.28 Km from lease area in North direction.
17	Nearest Habitation	:	Sirka Basti at a distance of 143m in West direction.
18	Nearest Rail Station	:	Nearest railway station is Lodhma Railway Station which is about 3.5 Km from the applied lease area in North-West direction.
19	Nearest Air Port	:	Birsa Munda Ranchi Airport 22.8 Km
20	Nearest Forest	:	Divisional Forest Officer, Khunti certified that the distance of reserved / protected forest is 969 meters from proposed project site.
21	Nearest Wildlife Sanctuary	:	The project location is at approx. 21.4 KM from the nearest Bhagwan Birsa Mrig Vihar Wildlife Sanctuary.
22	Road & Highways	:	NH-75- Road at about 7.0 Km in West direction.
23	Approach Road	:	At a distance of 683 metres in North direction.

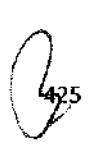
CO-ORDINATES:

Sl. No.	LATITUDE	LONGITUDE
P1	23°12'17.962"	85°13'35.786"
P2	23°12'17.929"	85°13'36.624"
P3	23°12'17.121"	85°13'38.214"
P4	23°12'16.640"	85°13'39.217"
P5	23°12'16.418"	85°13'40.720"
P6	23°12'15.668"	85°13'41.229"
P7	23°12'14.604"	85°13'41.053"
P8	23°12'14.667"	85°13'38.180"
P9	23°12'13.499"	85°13'37.739"
P10	23°12'14.124"	85°13'35.142"
P11	23°12'14.718"	85°13'32.686"
P12	23°12'16.062"	85°13'32.029"
P13	23°12'16.907"	85°13'33.721"

LAND DETAILS

Khata no.	Plot no.
77	1572 / 1644







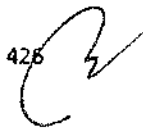
STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Deputy Commissioner, Khunti vide letter no. 481/M, dated 22.06.2026.
2	CO	:	The CO, Karra (Khunti) vide letter no. 512, dated 29.05.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatiyani. During the appraisal it was seen from the KML that few houses exists at a distance of 143 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Khunti vide memo no. 569/M, dated 13.07.2026 certified that no other mining lease area exists within 500 meters radius from proposed project site.
4	DFO Wild Life	:	DFO, Wildlife Division, Ranchi vide letter no. 479, dated 21.07.2025 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Khunti Forest Division vide letter no. 960, dated 25.05.2026 certified that the distance of notified/demarcated forest is 969 meters from proposed project site.
6	DSR	:	The DMO, Khunti has certified vide memo no. 570/M, dated 13.07.2026 that this project is mentioned in approved DSR of Khunti District as a potential Zone Area - III.
7	Gram Sabha	:	BDO, Karra (Khunti) vide letter no. 512, dated 03.06.2025 informed that Gram Sabha conducted on 30.05.2025.
8	Mine Plan Approval	:	Approved by District Mining Officer, Khunti vide Memo No. 560, dated 13.07.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/80/2026/3170, dated : 19.08.2026.
10	Qualified Person	:	Dr. Gurbinder Singh Jaiswal was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	1.741 Ha.
3	Waste Generation	:	23485 cum






4	Stripping Ratio	:	1:0.012
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m and 7 in numbers
7	Elevation of Mine	:	664 m AMSL to 650 m AMSL
8	Ground Level Elevation	:	650 m AMSL
9	Ultimate Working Depth	:	617 m AML
10	Water Table	:	602 m AMSL
11	Topography of Mine	:	The applied lease area represents hillock of granite gneiss trending.
12	Explosive Requirement	:	137 kg/day
13	Diesel/Fuel requirement	:	659 litre/day

Production and Waste/OBR table

Year	Total Excavation	Production of Stone		O.B. in cum	Total waste in cum	Stripping of Ratio t/m ³
		cum	MT			
1 st Year	136400	122140	329778	14260	14260	1:0.04
2 nd Year	126325	122140	329778	4185	4185	1:0.01
3 rd Year	122140	122140	329778	0	0	1:0.0
4 th Year	122140	122140	329778	0	0	1:0.0
5 th Year	126900	121860	329022	5040	5040	1:0.01
Total	633905	610420	1648134	23485	23485	

Present and future land use pattern

Pattern of Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual Period (Ha)
Excavation	Nil	1.741	1.741 (0.11 Backfilling, 1.32 water reservoir, 0.311 dead bench)
Waste Dump	Nil	0.18 (including in mining) (including in mining)	Nil

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Road	Nil	0.05	Nil
Infrastructure (Proposed crusher)	Nil	Nil	Nil
Plantation (Green Belt)	Nil	0.485 (Within safety zone)	0.485 (Within safety zone)
Total	Nil	2.226	2.226

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.485	776	1600 tree per hectare	1st Year
Approach Road	683	1366	2m X 2m spacing	1st year
Backfilling	0.11	176	1600 tree per hectare	End of Mine
Deadbench	0.311	498	1600 tree per hectare	End of Mine
TOTAL		2816		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species				

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipment's needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below :

Budgetary Provision (in Lakhs) of Project Cost		
Particulars	Capital	Recurring
Land	0.00	137761.04

Infrastructure			700000.00	0.00
Mining Equipment			0.00	19700000.00
Equipment	Quantity	Rent per year		
Loader	1	600000		
Hyva/Dumper	5	2000000		
Wagon Drill	3	1000000		
Compressor	3	1000000		
Water Tanker	1	600000		
DG Set	1	100000		
Excavator	3	800000		
Water Facility for Domestic Purpose "1.08" KLD (Annual Water Demand "324"KL @4L per Tanker, total number of tanker required ("81") and per tanker cost @Rs. 500)			0.00	40500.00
Statutory Clearances			500000.00	0.00
Mine Closure Cost for Plantation of "674" number of tree @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance			2,02,200	0.00
Mine Closure Cost for fencing around mine			100000.00	0.00
Environment Management Plan (EMP) Cost			1865600.00	1095900.00
Total			33,67,800.00	20974161.04

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "2142" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	642600.00	107100.00
Water Facility for Horticulture "12.852" KLD & Dust Suppression "8.92" KLD (Annual Water Demand "6531.6"KL @4L per Tanker, total number of tankers required ("1633") and per tankers cost @Rs. 500)	0.00	816500.00
Garland Drain & Desiltation Pond	223000.00	22300.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA. II (M) dated 29/10/2014 issued by MoEF & CC	1000000.00	100000.00
Environment Monitoring & Compliance	0.00	50000.00

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Total	1865600.00	1095900.00
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Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

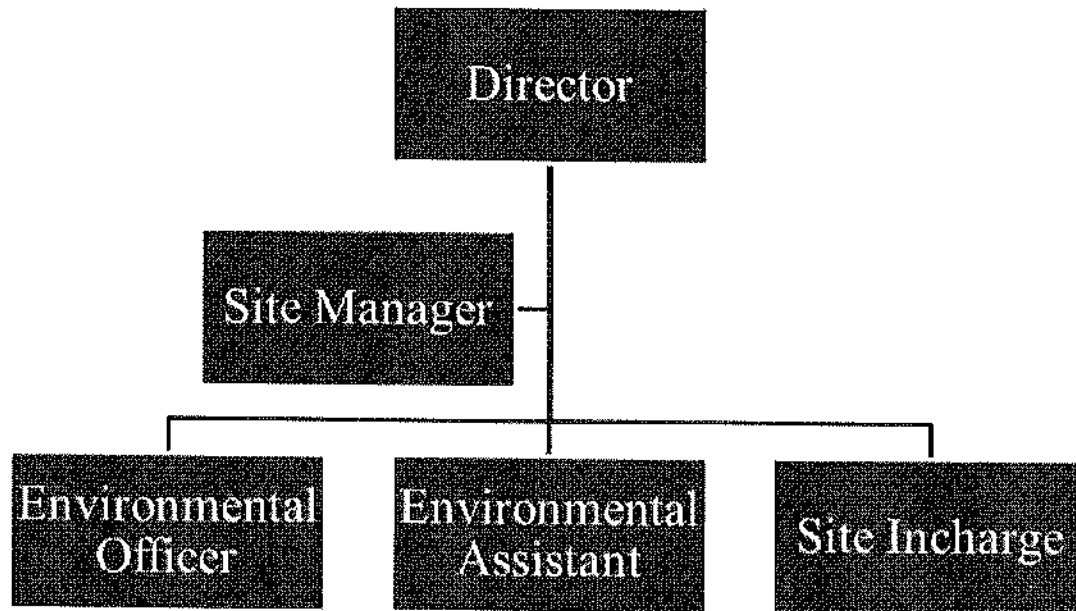
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	During plan period, a total of 23485 cum of solid waste will be generated. This solid waste will be stored in external dump on eastern side of lease area. At the conceptual stage, all solid waste generated during mining operation will be backfilled
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and

	collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.

Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours.

	▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management.

	▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.

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- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Sirka Stone Deposit of M/s J.S. Enterprises, Village : Sirka, Tehsil : Karra, Distt. : Khunti, Jharkhand (2.226 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer – cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/80/2026/3170, dated : 19.08.2026 is also included as Annexure – I (O) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.
- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests

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- .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

20. Teram Stone Deposit of Shri Jagmohan Das, Village : Teram, Tehsil : Khunti, Distt. : Khunti, Jharkhand (1.052 Ha).

(Proposal no.: SIA/JH/MIN/ 585436 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B2.

Application for Environmental Clearance (EC).

EC Application for: Proposed Capacity –26667 Cum per year or 72000 Tonnes per year

Project and Location Details:

Sl. No.	Parameter		Details
1	Project Name	:	Teram Stone Deposit
2	Lessee:	:	Sri Jagmohan Das (Proprietor)
3	Lessee Address	:	Village - Teram, P.O.-Dundigara, P.S.- Khunti, District-Khunti, Jharkhand
4	Lease Area	:	1.052 Ha. 2.60 Acre
5	Type of Land	:	Non-Forest Raiyati Land
6	Project Cost	:	Capital: Rs. 27,52,000.00 Recurring: Rs. 5707858.62 per year
7	EMP Budget	:	Capital: Rs. 13,17,300.00 Recurring: Rs. 412870.00 per year
8	New or Expansion	:	New
9	Mineable Reserves	:	2,11,206 Cum 5,70,256 Tonnes
10	Mine Life	:	10 Years
11	Man power	:	20

12	Water Requirement	:	9.25 KLD
13	Water Source	:	By authorised hired water tankers
14	DG Set / power	:	NA
15	Crusher	:	No crusher
16	Nearest Water Body	:	Kanchi River at a distance of 1.8 km in North-East direction
17	Nearest Habitation	:	Teram Village at a distance of 260 meters
18	Nearest Rail Station	:	Lodhma Railway Station at a distance of 16 km in North-West direction
19	Nearest Air Port	:	Birsa Munda Airport, Ranchi at a distance of 19.43 Km in North direction.
20	Nearest Forest	:	At a distance of 812 meters as per the DFO report vide letter no. 963 dated 25/05/2026
21	Distance of nearest ESZ of Wildlife Sanctuary or National Park	:	The project location is at approx. 11.56 Km from the nearest Eco Sensitive Zone of Biodiversity Park.
22	Road & Highways	:	NH-20 Khunti-Ranchi Road at a distance of 6.5 km in West direction
23	Approach Road	:	At a distance of 50 meters

CO-ORDINATES

POINTS	LATITUDE	LONGITUDE
1	23° 08' 35.0316" N	85° 19' 57.9951" E
2	23° 08' 34.8862" N	85° 19' 58.6071" E
3	23° 08' 35.5582" N	85° 19' 58.9000" E
4	23° 08' 35.3471" N	85° 19' 59.9427" E
5	23° 08' 35.0217" N	85° 20' 01.2893" E
6	23° 08' 34.6513" N	85° 20' 01.1932" E
7	23° 08' 33.4960" N	85° 20' 01.2162" E
8	23° 08' 32.8779" N	85° 20' 01.1149" E
9	23° 08' 32.8808" N	85° 20' 00.5223" E
10	23° 08' 32.5429" N	85° 20' 00.5383" E
11	23° 08' 31.1272" N	85° 20' 00.6206" E
12	23° 08' 31.2085" N	85° 19' 59.9103" E
13	23° 08' 31.2053" N	85° 19' 58.7628" E
14	23° 08' 30.9470" N	85° 19' 58.4198" E
15	23° 08' 31.2020" N	85° 19' 58.0755" E
16	23° 08' 31.5227" N	85° 19' 57.6697" E
17	23° 08' 32.0318" N	85° 19' 57.8231" E
18	23° 08' 32.1087" N	85° 19' 58.2423" E
19	23° 08' 32.4781" N	85° 19' 58.1153" E
20	23° 08' 32.6620" N	85° 19' 57.6511" E

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21	23° 08' 33.2301" N	85° 19' 57.8047" E
22	23° 08' 33.5888" N	85° 19' 58.0377" E
23	23° 08' 33.8649" N	85° 19' 58.0036" E
24	23° 08' 33.9158" N	85° 19' 57.4829" E
25	23° 08' 33.2251" N	85° 19' 58.3087" E
26	23° 08' 33.1466" N	85° 19' 58.6966" E
27	23° 08' 32.7486" N	85° 19' 58.2952" E
28	23° 08' 32.8509" N	85° 19' 57.9957" E

LAND DETAILS

Khata no.	Plot no.
02	375

STATUTORY CLEARANCES

1	LOI / Lease docs	:	The Letter of Intent (LoI) has been issued by Deputy Commissioner, Khunti vide letter no. 437/M, dated 05.06.2026.
2	CO	:	The CO, Sadar, Khunti vide letter no. 1072, dated 31.07.2025 has mentioned the plot no. of the project is not recorded as "Jungle-Jhari" in R.S. Khatyan. During the appraisal it was seen from the KML that few houses exists at a distance of 260 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Khunti vide memo no. 544/M, dated 06.07.2026 certified that 01 other mining lease area (3.61 Acre) exists within 500 meters radius from proposed project site and total area is 6.21 Acre.
4	DFO Wild Life	:	DFO, Wildlife Division, Ranchi vide letter no. 479, dated 25.06.2026 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
5	DFO Territorial	:	Divisional Forest Officer, Khunti Forest Division vide letter no. 963, dated 25.05.2026 certified that the distance of notified/demarcated forest is 812 meters from proposed project site.
6	DSR	:	The DMO, Khunti has certified vide memo no. 543/M, dated 06.07.2026 that this project is mentioned in approved DSR of Khunti District as a potential Area (Page no. 172).
7	Gram Sabha	:	BDO, Khunti vide letter no. 627 (ii), dated 07.08.2025 informed that Gram Sabha conducted on 07.08.2025.

8	Mine Plan Approval	:	Approved by District Mining Officer, Khunti vide Memo No. 550, dated 08.07.2026.
9	Environmental Safeguard from Jharkhand State Pollution Control Board (JSPCB)	:	Environmental Safeguard issued by Environmental Engineer – cum – Nodal Officer, Jharkhand State Pollution Control Board (JSPCB) vide its Memo No.: PC/SEIAA/EC-CTE/82/2026/3173, dated : 19.08.2026.
10	Qualified Person	:	Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	0.673 Ha.
3	Waste Generation	:	15827 cum
4	Stripping Ratio	:	1:0.02
5	Working Days	:	300
6	Benches: size & No	:	6m to 6m and 6 in numbers
7	Elevation of Mine	:	576 m AMSL to 571 m AMSL
8	Ground Level Elevation	:	571 m AMSL
9	Ultimate Working Depth	:	539 m AMSL
10	Water Table	:	520 m AMSL
11	Topography of Mine	:	Undulating Hillocks
12	Explosive Requirement	:	24 kg/day
13	Diesel/Fuel requirement	:	144 litre/day

Production Details

Year	Production of stone in Cum	Production of stone in Tonnes	Overburden in cum	Intercalated waste in Cum	Total Waste in Cum
1 st Year	19618	52967	9940	1033	10973
2 nd Year	19950	53865	0	1050	1050
3 rd Year	21613	58354	0	1138	1138
4 th Year	24007	64818	0	1264	1264
5 th Year	26667	72000	0	1404	1404
Total	111853	302003	9940	5887	15827

Land Use

Land Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual period (Ha)
Quarry	0.0	0.375	0.673 (0.094 Ha area shall be Backfilled, 0.393 Ha converted into water reservoir & 0.186 Ha shall be left as dead benches)
Waste Dump	0.0	0.131	Nil (comes under quarry)
Road	0.0	0.018	Nil (comes under quarry)
Crusher	0.0	0.0	Nil
Safety Zone Plantation	0.0	0.379	0.379
Total	0.0	0.903	1.052
Unused Area	1.052	0.149	0.0
Total Lease Area	1.052		

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.379	607	1600 tree per hectare	1st Year
Approach Road	50.000	100	2m X 2m spacing	1st year
Dead Bench	0.186	298	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.094	151	1600 tree per hectare	End of Mine
TOTAL		1156.00		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species				

- As per MoEF&CC OM No. F.No. IA3-22/3/2024-IA.III dated 24.07.2024, 10% of the proposed green belt shall be developed under the "Ek Ped Maa Ke Naam" plantation campaign.
- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable

species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

- Plantation on dead benches and on backfilled up area would be done during mine closure phase cost for such plantation is included in budget for mine closure.

Cost Estimates

The mining plan for the project has estimated the requirement of equipments needed for mining operations. The capital cost has been estimated on basis of this provision.

Estimated capital cost on plants & machineries are given below:

Budgetary Provision (in Lakhs) of Project Cost				
Particulars			Capital	Recurring
Land			0.00	64988.62
Infrastructure			700000.00	0.00
Mining Equipment			0.00	5200000.00
Equipment	Quantity	Rent per year		
Dumper	1	2000000		
Wagon Drill	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.8" KLD (Annual Water Demand "240"KL @4L per Tanker, total number of tankers required ("60") and per tanker cost @Rs. 500)			0.00	30000.00
Statutory Clearances			500000.00	0.00
Mine Closure Cost for Plantation of "449" number of tree @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance			134700.00	0.00
Mine Closure Cost for fencing around mine			100000.00	0.00
Environment Management Plan (EMP) Cost			1317300.00	412870.00
Total			2752000.00	5707858.62

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "707" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	212100.00	35350.00
Water Facility for Horticulture "4.242" KLD & Dust Suppression	0.00	317000.00

"4.208" KLD (Annual Water Demand "2535"KL @4L per Tanker, total number of tankers required ("634") and per tanker cost @Rs. 500)		
Garland Drain & Desiltation Pond	105200.00	10520.00
Environment Monitoring & Compliance	0.00	50000.00
Compliance of Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29/10/2014 issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC)	10,00,000.00	0.00
Total	13,17,300.00	412870.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	During plan period, a total of 15827 cum of solid waste will be generated. This solid waste will be stored in external dump on south side of lease area. At the conceptual stage, all solid waste generated during mining operation will be backfilled.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and

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	working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection

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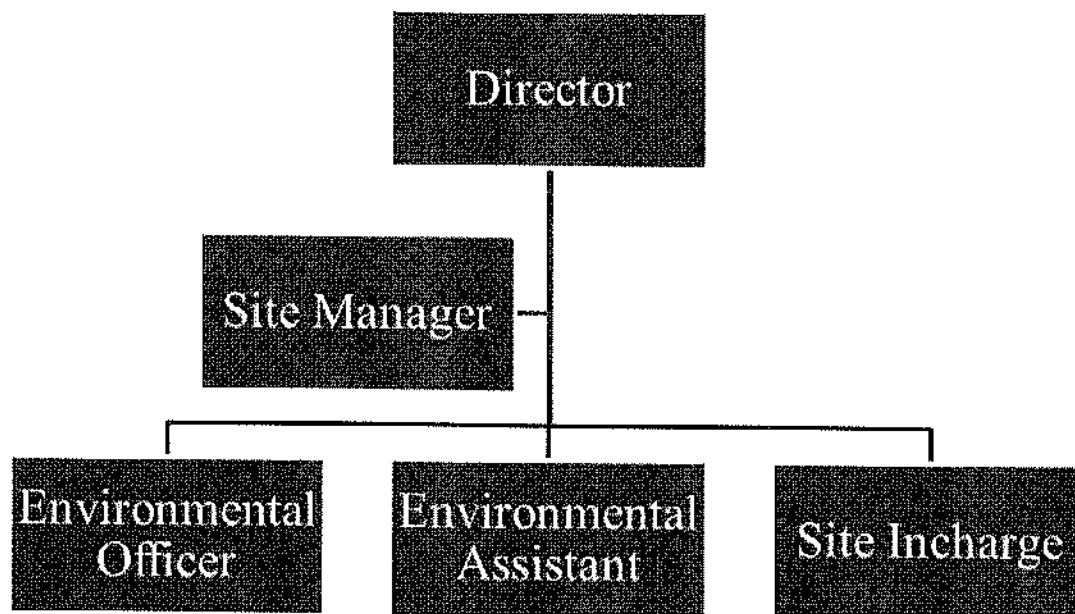
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that

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	the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
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	▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- a. Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- b. The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.

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- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the presentation made and information provided, the Committee in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 decided that the proposal for Teram Stone Deposit of Shri Jagmohan Das, Village : Teram, Tehsil : Khunti, Distt. : Khunti, Jharkhand (1.052 Ha) is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure – I along with following specific conditions and Environmental Safeguard as provided by Environmental Engineer – cum – Nodal Officer, JSPCB vide memo no. PC/SEIAA/EC-CTE/82/2026/3173, dated : 19.08.2026 is also included as Annexure – I (P) :

- I. The mine will come in operation only after obtaining permission from DGMS for controlled and delayed blasting.
- II. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- III. The Deputy Commissioner through District Mining Officer will ensure that the mines owner of the respective leases to complete the plantation and maintenance in a time bound manner.
- IV. Suitable plant species of not less than 2 M height to be planted equal to twice the area of saplings proposed in Safety zone. This is to be planted in land available near mines and outside safety zone. This will be in addition to plantation in safety zone. Newly planted saplings to be maintained for minimum 3 years with Geo-Tagged photographs.
- V. Dedicated water tanker to be provided for mine. The tanker to be used for spraying

water on haul road and for irrigating newly planted saplings only. Sprinkling to be done such that the haul road is kept moistened all the time with Geo-Tagged photographs.

- VI. Pre employment Occupational health check up for employees to be done and thereafter at annual interval for PLFT, Audiometry and other required tests .Summary findings of same to submitted along with 6 monthly compliance.
- VII. Ensure use of Quality PPEs equivalent not less than 3M make. Records of same to be maintained and submitted with 6 monthly compliance report with Geo-Tagged photographs.
- VIII. Keep vulnerable areas unmanned. Ensure rotation of duties. Records to be maintained and submitted with 6 monthly compliance report.
- IX. Failing of any of terms & conditions mentioned in EC can lead to revocation / cancellation of EC.

21. Chakarbarai Stone Deposit of M/s Shiv Shankar Minerals (Partners : Shri Vikash Kumar Yadav & Shri Brijendu Kumar), Village : Chakarbarai, Tehsil : Dumri, Distt. : Giridih, Jharkhand (2.254 Ha).

(Proposal no.: SIA/JH/MIN/ 589677 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Terms of Reference (ToR).

ToR Application for: Proposed Capacity – 48450 Cum per year or 130815 Tonnes per year

Project and Location Details:

Sl	Parameter	Details
1	Project Name	: Chakarbarai Stone Deposit
2	Lessee:	: M/s Shiv Shankar Minerals Partner- 1. Sri Vikash Kumar Yadav, 2. Sri Brijendu Kumar
3	Lessee Address	: At- House No.- 1761, Shanti Nagar, Tri nagar, Onkar Nagar, North-West Delhi
4	Lease Area	: 2.254 Ha. 5.57 Acres
5	Type of Land	: Non-Forest Raiyati Land

6	Project Cost	:	Capital: Rs. 3479700.00	Recurring: Rs 8829383.67 per year
7	EMP Budget	:	Capital: Rs. 1841000.00	Recurring: Rs 860140.00 per year
8	New or Expansion	:	New	
9	Mineable Reserves	:	453720 cum	1225044 tonnes
10	Mine Life	:	10 Years	
11	Man power	:	20	
12	Water Requirement	:	16.13 KLD	
13	Water Source	:	By authorised hired water tankers	
14	DG Set / power	:	-	
15	Crusher	:	Not Proposed	
16	Nearest Water Body	:	Seasonal Nala at a distance of approx. 45 meters	
17	Nearest Habitation	:	Chakarbarai Village at a distance of 600 metres on Western Direction	
18	Nearest Rail Station	:	Nearest railway stations is Parasnath railway station which is about 3.4 Km from the applied lease area in West direction.	
19	Nearest Air Port	:	Deoghar Airport is at a distance of 124 Km in North-East direction.	
20	Nearest Forest	:	Divisional Forest Officer, Giridih certified that the distance of reserved / protected forest is 470 meter from proposed project site.	
21	Nearest Wildlife Sanctuary	:	The project location is at approx. 1.91 KM from the nearest Parashnath wildlife sanctuary.	
21	Road & Highways	:	NH-19- Dumri-Govindpur Road at about 2.0 Km on southern side	
23	Approach Road	:	At a distance of 100 metres.	

CO-ORDINATES

Sl.No.	LATITUDE	LONGITUDE
P1	23° 58' 51.5873" N	86° 04' 07.7897" E
P2	23° 58' 50.0195" N	86° 04' 11.0276" E
P3	23° 58' 49.8296" N	86° 04' 11.2011" E
P4	23° 58' 49.7226" N	86° 04' 11.1658" E
P5	23° 58' 49.6121" N	86° 04' 11.3054" E
P6	23° 58' 49.2463" N	86° 04' 11.5883" E
P7	23° 58' 49.0438" N	86° 04' 11.9111" E
P8	23° 58' 49.0901" N	86° 04' 12.0707" E
P9	23° 58' 48.9486" N	86° 04' 12.5546" E
P10	23° 58' 48.6697" N	86° 04' 12.9184" E
P11	23° 58' 48.4695" N	86° 04' 13.0576" E
P12	23° 58' 48.2800" N	86° 04' 13.3729" E
P13	23° 58' 47.9099" N	86° 04' 13.6041" E

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P14	23° 58' 47.4763" N	86° 04' 14.1497" E
P15	23° 58' 47.1244" N	86° 04' 14.1455" E
P16	23° 58' 46.4767" N	86° 04' 14.6193" E
P17	23° 58' 45.5887" N	86° 04' 14.2398" E
P18	23° 58' 44.1849" N	86° 04' 13.8047" E
P19	23° 58' 43.6965" N	86° 04' 13.6967" E
P20	23° 58' 43.4034" N	86° 04' 13.5278" E
P21	23° 58' 43.4306" N	86° 04' 13.3592" E
P22	23° 58' 43.2500" N	86° 04' 12.9388" E
P23	23° 58' 44.1023" N	86° 04' 12.3975" E
P24	23° 58' 45.9923" N	86° 04' 10.5732" E
P25	23° 58' 46.5629" N	86° 04' 09.7169" E
P26	23° 58' 46.9303" N	86° 04' 08.9644" E
P27	23° 58' 47.1072" N	86° 04' 08.6921" E
P28	23° 58' 47.8735" N	86° 04' 09.4824" E
P29	23° 58' 48.2011" N	86° 04' 09.5949" E
P30	23° 58' 48.2312" N	86° 04' 09.4584" E
P31	23° 58' 48.1225" N	86° 04' 09.0918" E
P32	23° 58' 48.2775" N	86° 04' 08.7204" E
P33	23° 58' 48.2810" N	86° 04' 08.3087" E
P34	23° 58' 48.4143" N	86° 04' 08.0703" E
P35	23° 58' 49.3346" N	86° 04' 08.0289" E

LAND DETAILS

Khata no.	Plot no.
17	308 (P), 320 & 328
24	307 (P), 321 (P), 322 (P), 323 (P), 329 (P), 330 (P), 332 (P), 334 & 335 (P)
66	333

STATUTORY CLEARANCES

1	LOI/Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Office, Giridih vide letter no. 500/M dated 17.05.2025.
2	CO	:	The CO, Dumri (Giridih) vide letter no. 339, dated 30.04.2025 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in Khatyan and also mentioned that the Educational institute at a distance of 400 meter of proposed project site. During the appraisal it was seen from the KML that

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			Nala exists at a distance of 50 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Giridih vide memo no. 604/M, dated 17.06.2025 certified that 02 Lol (4.6350 Acre & 6.11 Acre) exists within 500 m radius from proposed project site and total area is 16.315 Acre.
4	DFO Wild Life	:	Divisional Forest Officer, Wildlife Division, Hazaribag vide letter no. 190, dated 15.02.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	DFO, Giridih East Forest Division vide letter no. 1577, dated 21.07.2026 certified that the distance of reserved / protected forest is 470 meters from proposed project site.
6	DSR	:	The DMO, Giridih has certified vide memo no. 122/Khanan, dated 09.02.2026 that this project is mentioned in approved DSR of Giridih District as a Potential Zone 01.
7	Gram Sabha	:	BDO, Dumri (Giridih) vide letter no. 411, dated 21.03.2025 informed that Gram Sabha conducted on 10.02.2025.
8	Mine Plan Approval	:	Approved by The Assistant Director, Geology, District Geological Office, Bokaro vide Memo No. 19, dated 02.02.2026.
9	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	1.460 Ha.
3	Waste Generation	:	34750 cum
4	Stripping Ratio	:	1:0.07
5	Working Days	:	300
6	Bench: size & No	:	6m to 6m and 8 in numbers
7	Elevation of Mine	:	294 m AMSL to 288 m AMSL
8	Ground Level Elevation	:	288 m AMSL
9	Ultimate Working Depth	:	245 m AML
10	Water Table	:	220 m AMSL

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11	Topography of Mine	:	The applied lease area represents a small hillock
12	Explosive Requirement	:	55 kg/day
13	Diesel/Fuel requirement	:	262 litre/day

Production Details

Year	Production of stone in Cum	Production of stone in Tonnes	Overburden in Cum	Intercalated waste in Cum	Total Waste in Cum
1 st Year	44460	120042	22500	2340	24840
2 nd Year	45790	123633	0	2410	2410
3 rd Year	46550	125685	0	2450	2450
4 th Year	47500	128250	0	2500	2500
5 th Year	48450	130815	0	2550	2550
Total	232750	628425	22500	12250	34750

Land Use Pattern

Land Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual period (Ha)
Excavation	0.0	0.979	1.460 (0.144 ha area shall be Backfilled, 0.756 ha converted in to water reservoir & 0.561 ha shall be left as dead benches)
Waste Dump	0.0	0.231	Nil (waste dump to be removed and backfilled)
Village Road	0.035	0.035	0.035
Village Road Barrier	0.227	0.227	0.227
Mine Road	0.0	0.002	0.0
Crusher	0.00	0.00	0.00
Safety Zone Plantation	0.0	0.532	0.532
Total	0.262	2.006	2.254
Unused Area	1.992	0.248	0.0
Total Lease Area	2.254		

ENVIRONMENT MANAGEMENT
Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.532	852	1600 tree per hectare	1st Year
Approach Road	100	200	2m X 2m spacing	1st year
Dead Bench	0.561	898	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.144	231	1600 tree per hectare	End of Mine
TOTAL		2181		
Species: Neem, Peepal, Arjun, Ashoka, Gulmohar, Banyan, Bamboo: - Bombas, Nutans, Toolda, Strictus & other Native Species				

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipments needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below :

Budgetary Provision (in lakhs) of Project				
Cost				
Particulars			Capital	Recurring
Land			0.00	139243.67
Infrastructure			700000.00	0.00
Mining Equipment			0.00	7800000.00
Equipment	Quantity	Rent per year		
Loader	1	600000		
Dumper	2	2000000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.8" KLD (Annual Water			0.00	30000.00

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Demand "240"KL @4L per Tanker, total number of tanker required ("60") and per tanker cost @Rs. 500)		
Statutory Clearances	500000.00	0.00
Mine Closure Cost for Plantation of "1129" number of tree @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	338700.00	0.00
Mine Closure Cost for fencing around mine	100000.00	0.00
Environment Management Plan (EMP) Cost	1841000.00	860140.00
Total	3479700.00	8829383.67

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "1052" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	315600.00	52600.00
Water Facility for Horticulture "6.312" KLD & Dust Suppression "9.016" KLD (Annual Water Demand "4598.4"KL @4L per Tanker, total number of tankers required ("1150") and per tanker cost @Rs. 500)	0.00	575000.00
Garland Drain & Desiltation Pond	225400.00	22540.00
To prevent the impact of mining activities on the Nala	3,00,000.00	60,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA. II (M) dated 29/10/2014 issued by MoEF & CC	1000000.00	100000.00
Environment Monitoring & Compliance	0.00	50000.00
Total	1841000.00	860140.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative	2 station	Six Monthly

	testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.		
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Environment Management Practices to be followed:

Aspect	Mitigation Measures / Control Measures
Solid Waste Management	In this applied lease area, the stone deposit is covered with 2m layer of gritty intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. It has been calculated that total 34750 cum in-situ waste shall be generated during this plan period out of which 21224 cum (In situ) shall be utilized for approach & haul road maintenance. The rest waste material 13526 cum in situ 16907.50 cum loose & 14371.38 cum compact waste shall be temporary dumped on the northern part of the applied lease area and it will cover about 0.231ha area. While excavation of insitu waste, its volume shall be increase, as it becomes loose (insitu cum X 1.25), during the dumping/backfilling these loose materials shall be compacted with the use of dozer and volume will be decreased up to 85% of loose waste. Garland drain shall be provided along the OB dump. This drain would collect surface run off from dump body. Water collected in this drain would be stored in a sedimentation tank, the treated water shall be released for natural runoff.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.
Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of

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	vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge. ▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-

	availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives	▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards	Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for

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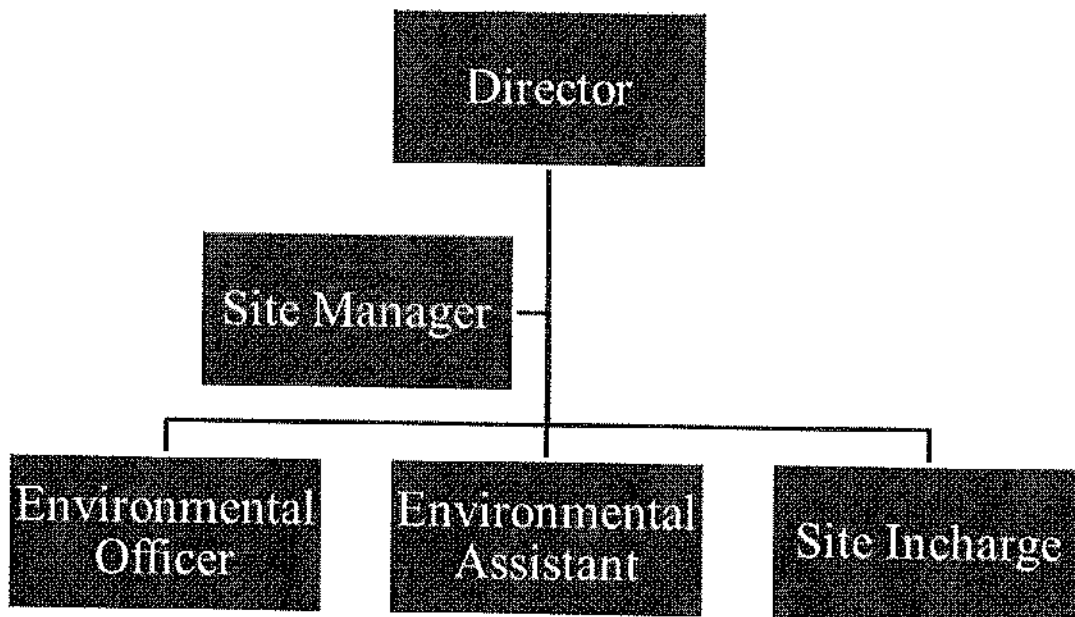
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	the purpose by the management. - Navigation signs will be provided at each and every turning point up to the main road (wherever required). - To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.
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Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.
- If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- The Boundary Pillars of the proposed mine lease area will be maintained properly.
- One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.

- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the information contained in the documents submitted and the presentation made before the State Level Expert Appraisal Committee (SEAC) during its meetings held during 23, 24, 25, 26 & 27.08.2026, the Committee recommends in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 for issuing of ToR to SEIAA for undertaking detailed EIA / EMP study as mentioned in Annexure VI alongwith following specific condition :-

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. Environmental Management Plan to be prepared and incorporated in the final EIA / EMP report w.r.t. Educational institute exists at a distance of 400 meters and Seasonal Nala situated nearby to proposed ML area.

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22. Chakarbarai Stone Deposit of M/s Chakarbarai Stone Mines (Partners : Shri Rakesh Sen Gupta & Shri Raju Yadav), Village : Chakarbarai, Tehsil : Dumri, Distt. : Giridih, Jharkhand (2.473 Ha).

(Proposal no.: SIA/JH/MIN/ 589650 /2026)

Name of the consultant : Crystal Consultants, Ranchi, Jharkhand.

This is a new project which has been taken for appraisal on 26.08.2026.

Project Sector: 1(a) Mining of Minerals, Category: B1.

Application for Terms of Reference (ToR).

ToR Application for: Proposed Capacity – 55814 Cum per year or 150699 Tonnes per year

Project and Location Details:

Sl No.	Parameter	Details
1	Project Name	: Chakarbarai Stone Deposit
2	Lessee:	: M/s Chakarbarai Stone Mines Partner- Sri Rakesh Sen Gupta & Sri Raju Yadav
3	Lessee Address	: At-Rajpura Nawada Basti, P.O - Jhumri Telaiya, District- Koderma.
4	Lease Area	: 2.473 Ha. 6.11 Acres
5	Type of Land	: Non-Forest Raiyati Land
6	Project Cost	: Capital: Rs. 3533400.00 Recurring: 8854902.67 per year
7	EMP Budget	: Capital: Rs. 1837700.00 Recurring: Rs. 872130.00 per year
8	New or Expansion	: New
9	Mineable Reserves	: 521199 cum 1407236 tonnes
10	Mine Life	: 10 Years
11	Man power	: 20
12	Water Requirement	: 16.50 KLD
13	Water Source	: By authorised hired water tankers
14	DG Set / power	: -
15	Crusher	: No crusher
16	Nearest Water Body	: Seasonal nala at a distance of 82 meters.
17	Nearest Habitation	: Chakarbarai Village at a distance of 600 metres on Western Direction
18	Nearest Rail Station	: Nearest railway stations is Parasnath railway station which is about 3.4 Km from the applied lease area in West direction.

19	Nearest Air Port	:	Deoghar Airport is at a distance of 124 Km in North-East direction.
20	Nearest Forest	:	Divisional Forest Officer, Giridih certified that the distance of reserved / protected forest is 600 meters from proposed project site.
21	Nearest Wildlife Sanctuary	:	The project location is at approx. 1.99 KM from the nearest Parashnath wildlife sanctuary.
22	Road & Highways	:	NH-19- Dumri-Govindpur Road at about 2.2Km on southern side
23	Approach road	:	At a distance of 20 meters
24	Environmental monitoring base line data	:	Base line data not created.

CO-ORDINATES

Sl.No.	LATITUDE	LONGITUDE
1	23° 58' 56.8108" N	86° 04' 16.3693" E
2	23° 58' 55.4553" N	86° 04' 15.2641" E
3	23° 58' 55.0455" N	86° 04' 14.6228" E
4	23° 58' 54.6503" N	86° 04' 14.4741" E
5	23° 58' 53.7519" N	86° 04' 14.8018" E
6	23° 58' 53.2415" N	86° 04' 14.4009" E
7	23° 58' 53.2387" N	86° 04' 13.9342" E
8	23° 58' 52.6555" N	86° 04' 13.8155" E
9	23° 58' 51.4314" N	86° 04' 14.2899" E
10	23° 58' 51.3711" N	86° 04' 14.5687" E
11	23° 58' 50.3150" N	86° 04' 14.9269" E
12	23° 58' 49.6552" N	86° 04' 14.7943" E
13	23° 58' 48.7028" N	86° 04' 13.9611" E
14	23° 58' 49.4259" N	86° 04' 13.1945" E
15	23° 58' 51.5239" N	86° 04' 09.2472" E
16	23° 58' 52.7659" N	86° 04' 10.4880" E
17	23° 58' 53.0911" N	86° 04' 11.4495" E
18	23° 58' 53.4431" N	86° 04' 11.6903" E
19	23° 58' 53.6470" N	86° 04' 11.3324" E
20	23° 58' 55.2604" N	86° 04' 11.6422" E
21	23° 58' 57.4609" N	86° 04' 12.4354" E
22	23° 58' 57.3559" N	86° 04' 14.4687" E
23	23° 58' 56.8108" N	86° 04' 15.3202" E

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LAND DETAILS

Khata no.	Plot no.
17	248, 289, 293 & 301
24	288, 290 (P), 291, 294, 299, 300, 302, 303, 304 (P), 305 (P), 306 (P) & 307 (P)
30	236, 238 & 239 (P)
61	249, 284, 296 & 297
66	287, 292, 295 & 298

STATUTORY CLEARANCES

1	LOI/Lease docs	:	The Letter of Intent (LoI) has been issued by District Mining Office, Giridih vide letter no. 468/M dated 08.05.2025.
2	CO	:	The CO, Dumri (Giridih) vide letter no. 340, dated 30.04.2025 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in Khatian. During the appraisal it was seen from the KML that Nala exists at a distance of 40 meters from mining lease area. For which detailed Environmental Management Plan has been prepared and submitted.
3	DMO Cluster	:	DMO, Giridih vide memo no. 606/M, dated 17.06.2025 certified that 02 LoI (4.6350 Acre & 5.57 Acre) exists within 500 m radius from proposed project site and total area is 16.315 Acre.
4	DFO Wild Life	:	Divisional Forest Officer, Wildlife Division, Hazaribag vide letter no. 189, dated 15.02.2025 certified that the proposed project site is outside Eco Sensitive Zone of Parasnath & Topchanchi Wildlife Sanctuary.
5	DFO Territorial	:	DFO, Giridih East Forest Division vide letter no. 1538, dated 17.07.2026 certified that the distance of reserved / protected forest is 600 meters from proposed project site.
6	DSR	:	The DMO, Giridih has certified vide memo no. 121/Khanan, dated 09.02.2026 that this project is mentioned in approved DSR of Giridih District as a Potential Zone 01.
7	Gram Sabha	:	BDO, Dumri (Giridih) vide letter no. 412, dated 21.03.2025 informed that Gram Sabha conducted on 11.02.2025.

8	Mine Plan Approval	:	Approved by The Assistant Director, Geology, District Geological Office, Bokaro vide Letter No. 18, dated 02.02.2026.
9	Qualified Person	:	Shri Vidya Bhushan Mishra was present in the meeting and affirmed that the mine plan has been prepared by him.

Working Details

1	Mining Method	:	Semi-mechanized "OTFM" Method
2	Quarry Area	:	1.893 Ha.
3	Waste Generation	:	49620 cum
4	Stripping Ratio	:	1:0.07
5	Working Days	:	300
6	Benches: size & No	:	6m to 6m and 6 in numbers
7	Elevation of Mine	:	278 m AMSL to 272 m AMSL
8	Ground Level Elevation	:	272 m AMSL
9	Ultimate Working Depth	:	238 m AML
10	Water Table	:	220 m AMSL
11	Topography of Mine	:	The applied lease area represents a small hillock
12	Explosive Requirement	:	63 kg/day
13	Diesel/Fuel requirement	:	301 litre/day

Production Details

Year	Production of stone in Cum	Production of stone in Tonnes	Overburden in Cum	Intercalated waste in Cum	Total waste in Cum
1 st Year	47880	129276	14880	2520	17400
2 nd Year	48906	132046	10560	2574	13134
3 rd Year	51072	137894	10680	2688	13368
4 th Year	52820	142614	0	2780	2780
5 th Year	55814	150699	0	2938	2938
Total	256492	692529	36120	13500	49620

Land Use Pattern

Land Utilization	Existing Land use (Ha)	At the end of plan period (Ha)	At Conceptual period (Ha)
Excavation	0.0	1.080	1.893 (0.213 Ha area shall be Backfilled, 1.066 Ha

			converted in to water reservoir & 0.611 Ha shall be left as dead benches)
Waste Dump	0.0	0.564	Nil (Comes under quarry)
Road	0.0	0.025	0.00 (Comes under quarry)
Infrastructure	0.00	0.00	0.00
Safety Zone Plantation	0.0	0.580	0.580
Total	0.0	2.249	2.473
Unused Area	2.473	0.224	0.00
Total Lease Area	2.473		

ENVIRONMENT MANAGEMENT

Green Belt Development

Plantation				
Location	Area (Ha.) or Length (m)	No. of tree	Calculation	Timeline
Safety Zone	0.580	928	1600 tree per hectare	1st Year
Approach Road	20	40	2m X 2m spacing	1st year
Dead Bench	0.611	978	1600 tree per hectare	End of Mine
Backfilled area (level upto surface)	0.213	341	1600 tree per hectare	End of Mine
TOTAL		2287		

- Gabion Plantation work in the safety zone (7.5 m width around the proposed lease boundary) and on either side of approach road in two rows with the spacing of 3x3 m with suitable species such as timber & fruit bearing etc. will be done in first year of operation. Maintenance work such as h/w, mortality replacement, protection and watering shall be undertaken for the life of mine as per norms and schedule issued by PCCF, Development, Department of Forest, Environment & Climate Change, Govt. of Jharkhand. Records of same to be maintained and will be submitted with compliance report.

Cost Estimates

The mining plan for the project has estimated the requirement of equipments needed for mining operations. The capital cost has been estimated on basis of this provision. Estimated capital cost on plants & machineries are given below:

Budgetary Provision (in Lakhs) of Project Cost		
Particulars	Capital	Recurring
Land	0.00	152772.67
Infrastructure	700000.00	0.00
Mining Equipment	0.00	780000.00

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Equipment	Quantity	Rent per year		
Loader	1	600000		
Dumper	2	2000000		
Compressor	1	1000000		
Water Sprinkler	1	600000		
Rock Breaker	1	800000		
Excavator	1	800000		
Water Facility for Domestic Purpose "0.8" KLD (Annual Water Demand "240"KL @4L per Tanker, total number of tankers required ("60") and per tanker cost @Rs. 500)		0.00		30000.00
Statutory Clearances		500000.00		0.00
Mine Closure Cost for Plantation of "1319" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance		395700.00		0.00
Mine Closure Cost for fencing around mine		100000.00		0.00
Environment Management Plan (EMP) Cost		1837700.00		872130.00
Total		3533400.00		8854902.67

Environment Management Budget

Budgetary Provision (in Lakhs) of Environment Management Plan (EMP)		
Particulars	Capital	Recurring
Plantation of "968" number of trees @Rs.300 per tree for plant & @Rs. 50 per tree for maintenance	290400.00	48400.00
Water Facility for Horticulture "5.808" KLD & Dust Suppression "9.892" KLD (Annual Water Demand "4710"KL @4L per Tanker, total number of tankers required ("1178") and per tanker cost @Rs. 500)	0.00	589000.00
Garland Drain & Desiltation Pond	247300.00	24730.00
To prevent the impact of mining activities on the Nala	3,00,000.00	60,000.00
To prevent the impact of mining activities on these habitations under compliance of OM Z-11013/57/2014-IA. II (M) dated 29/10/2014 issued by MoEF & CC	1000000.00	100000.00
Environment Monitoring & Compliance	0.00	50000.00
Total	1837700.00	872130.00

Environment Monitoring Plan (post operation)

Monitoring Parameters and Frequency of Monitoring

S. no	Monitoring Parameters	No. of Locations	Frequency of
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			Monitoring
1	Ambient Air: Ambient Air Quality at appropriate location for PM10, PM2.5, SO2, NOx in the vicinity of the mine area. In the surrounding area covering project site only.	3 Stations	Six Monthly
2	Water: Surface water sample in the vicinity of the Project area.	2 Surface water 2 Ground water	Six Monthly
3	Noise: Day & Night level Noise Monitoring.	4 stations	Six Monthly
4	Soil: Soil Monitoring, Qualitative and quantitative testing/analysis to check the soil fertility, porosity, texture, water holding capacity, etc.	2 station	Six Monthly

Environment Management Practices to be followed:

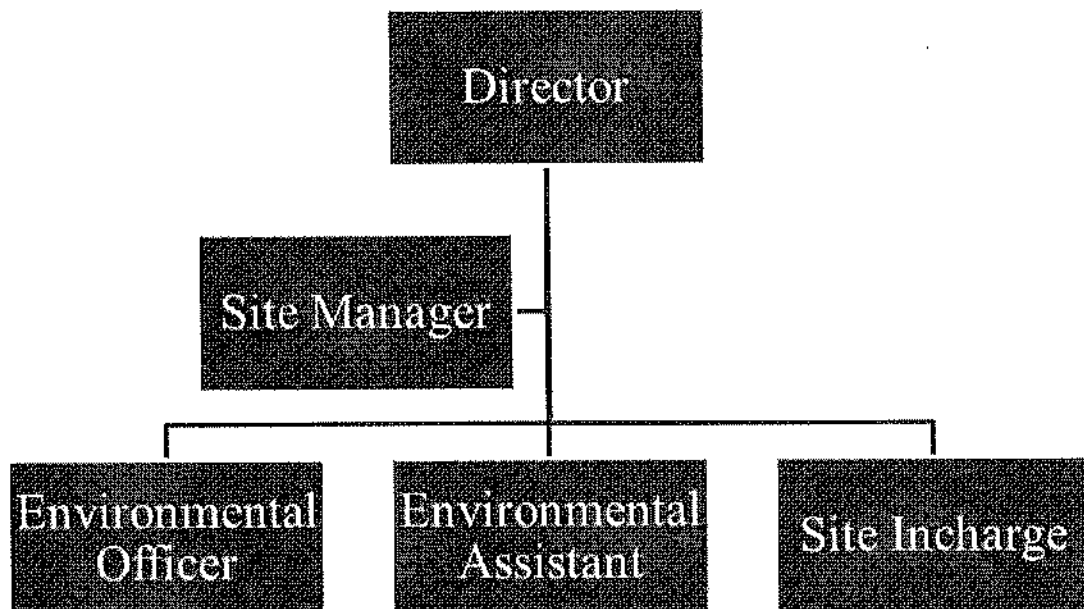
Aspect	Mitigation Measures / Control Measures
Solid Waste Management	In this applied lease area, the stone deposit is covered with 2m layer of intermixed soil which considered as over burden. The recovery of stone is about 95%, thus intercalated waste of only 5% shall be generate from this mine. It has been calculated that total 49620 cum in-situ waste shall be generated during this plan period. The 50% of waste generated during the plan period i.e. 24810 cum (In situ) shall be utilized for approach & haul road maintenance. The rest waste material (50%) i.e. 24810 cum in situ 31012.25 cum loose & 26360.41 cum compact waste shall be temporary dumped on the northern part of the applied lease area and it will cover about 0.564 ha area.
Air Quality Management	• Wet drilling and use of sharp drill bits to minimize dust generation. • Controlled blasting using optimum explosive charge during favorable weather conditions. • Regular maintenance of diesel equipment and vehicles to reduce emissions. • Water sprinkling on haul roads, loading/unloading points, and working areas. • All transport vehicles will have valid PUC certificates. • Greenbelt and roadside plantation to act as dust and noise barriers.
Water Quality Management	• Mining will be confined only above the Ground Water Table (GWT). • Rainwater accumulated in the pit will be collected and pumped out regularly during monsoon. • Settling sump will be provided to desilt pumped out of mine-pit and collected through garland drain before discharge into natural drainage. • Garland and foot drains will be constructed around the quarry to control surface runoff. • Sewage from rest shelters will be treated through septic tank-soak pit systems. • Foot drain would be provided around the external dump, if any.

Noise Quality Management	• Mining activities will be restricted to daytime and carried out with controlled blasting techniques. • Acoustic enclosures and mufflers will be provided for drilling and DG set operations. • Regular maintenance of mining machinery to minimize vibration and noise. • Greenbelt development around the lease boundary to attenuate noise propagation. • Use of delayed blasting technique to minimize the adverse impact of vibration.
Soil Quality Management	• Topsoil will be carefully removed and stored separately for future use in plantation and reclamation. • Garland drains and retaining walls will prevent soil erosion and siltation. • Spillage of oil or fuel will be avoided; impervious flooring and oil traps provided near storage areas • Post-mining, the area will be rehabilitated using stored topsoil and native vegetation
Flora & Fauna management	• No tree felling will be undertaken without obtaining permission from the competent authority. • Greenbelt and plantation will be developed using native species along approach roads and lease periphery (7.5m Safety Zone). • Dust suppression measures will minimize impact on surrounding vegetation
Socio Economy:	• Priority employment to local people in mining and ancillary activities. • Community development initiatives such as tree plantation drives, road maintenance, and local infrastructure support. • Awareness programs on safety, hygiene, and environmental protection
Monitoring & Reporting:	• Periodic monitoring of air, water (ground & surface), noise, and soil quality as per CPCB and SPCB guidelines. • All monitoring reports will be submitted to statutory authorities as per the compliance schedule. • Corrective measures will be taken immediately if any deviation from standards is observed.
Risk & Hazard	Activities which are likely to create risk are: Temporary Storage of Explosives, Charging of Explosives, Blasting, Drilling, Bench Formation, Loading / Unloading, Transportation Proposed Preventive measures: ▪ Overall slope angles of benches will be maintained at 45°. ▪ Unmanageable heights are not created. ▪ Loose sides are properly dressed. ▪ No loose stone or debris will be permitted to remain on the top of the bench or side of any excavation (Regulation 106(4) of MMR 1961). ▪ No undercutting of any face or sides will be permitted so as to cause any overhanging (Regulation 106(5) of MMR 1961) ▪ It will be ensured that the drilling equipment is suitable for the job. ▪ The person in charge of the drilling machine is competent to carry out the drilling operation; part of the training includes instructions to always face towards the open edge of the bench so that any inadvertent backward step is away from the edge.

		▪ Provision of portable rail fencing between the drilling operations and the edge of the bench ▪ Provision to attach a safety line to the drilling rig and provide a harness for the driller to wear. ▪ Restricted access to the area to all persons except those necessary for the drilling operation. ▪ Wet drilling will be carried out by constantly injecting a jet of water at the drill bit inside the hole, which prevents dust generation. ▪ In case due to any reason, wet drilling is not possible (due to non-availability of water), exhaust/ vacuum system will be provided which removes the dust from the drill hole continuously and discharges the same in a dust collector specially provided for the purpose. ▪ Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
Blasting & Handling of Explosives		▪ Blast hole geometry shall be properly designed. ▪ Blast site shall be wetted before and after blasting operations are completed. ▪ Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation. ▪ Blasting shall be conducted only during favourable weather conditions and only during the day time and permissible hours. ▪ While carrying out blasting operations near habitations, wide publicity will be given in the local area through announcement and other available media so that local people become aware of the blasting activities being undertaken in the area and take appropriate precautions. ▪ The vibrations should be monitored periodically in consultation with the local Mining authorities. ▪ Use of explosives is specialist work. Planning for a round of shots is necessary to ensure that the face is properly surveyed, holes correctly drilled, direction logged, the weight of explosive suitable for good fragmentation and the continuity of the initiator are but a few of the steps necessary to ensure its safe use. ▪ Proper and safe storage of explosives in approved and Licensed Magazine. ▪ Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette or Bidi etc. will be put in place. ▪ Explosives shall be conveyed in special containers. ▪ Explosives and detonators shall not be carried in the same container. ▪ The holes which have been charged with explosives will not be left unattended till blasting is completed.
Health Hazards		Health hazards should be interpreted as being harmful dust and noise which is emitted during surface mining operations. All suitable steps and precautions will be undertaken to ensure minimum health hazard. Provision of use of Personal Protective Equipment (PPE) will be kept. The PPE shall be of good make and quality, wherever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particulate hazardous dust and maintained to recommended standards. As personal protective equipment only affords limited protection it will only be used as a last resort and as an interim arrangement until other

	steps are taken to reduce the risk of personal injury to an acceptable level
Accident Prevention	▪ Mine road shall be made smooth regularly with a road roller. ▪ Mine road will be made sufficiently wide to keep two-way traffic. Regular water sprinkling will be done on mine road and haul road to avoid suspension of dust. ▪ All transportation within the mine lease area should be carried out directly under the supervision and control of management. ▪ The vehicles will be maintained in good working condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management. ▪ Navigation signs will be provided at each and every turning point up to the main road (wherever required). ▪ To avoid danger while reversing the vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/spotting operating.

Organizational Structure of Environment Management Cell:



EMP Cell Structure

The EMP Cell is committed to ensuring environmental sustainability and compliance with regulatory requirements for the Stone Mining Project. With a clear structure, roles, and responsibilities, the EMP Cell is equipped to manage environmental impacts and promote sustainable practices.

Undertaking submitted affirming:

- Ground water will be used only for domestic purpose and not be used for any mining activities or any other use.
- The District Survey Report has been prepared by a competent authority. Project Authorities will abide by any directives issued by any court of law in future.

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- c. If any changes are noticed in future regarding the contiguous / cluster area report issued by the mines department, then the applicable laws / rules will be binding on the Project Authorities and all necessary steps will be taken in this regard
- d. The Boundary Pillars of the proposed mine lease area will be maintained properly.
- e. One day post monsoon baseline data related to environment monitoring will be submitted with the first compliance report.
- f. The plantation work will be completed within the first year of operation. Thereafter the same will be maintained up to the Conceptual stage of the Mine.
- g. Sufficient water spray using water tankers will be done for effective dust suppression within the mine lease area and on haul roads.
- h. All the mining machineries / equipment and transport vehicles should be maintained in good condition and annually tested for fitness and PUC and records to be maintained.
- i. If any tree felling than necessary permission shall be taken from the competent authority.
- j. Slope of the Water bodies to be stabilized using gabion plantation created at the end of life of the mine.
- k. Suitable safety protection measures shall be taken around the water bodies to prevent any human or animals falling in to the water bodies created at the end of life of the mine.
- l. Personal protective equipments such as clothing, helmet, goggles or other garments or equipments designed to protect from injury or infection will be provided to working personnel.

Based on the information contained in the documents submitted and the presentation made before the State Level Expert Appraisal Committee (SEAC) during its meetings held during 23, 24, 25, 26 & 27.08.2026, the Committee recommends in the light of Hon'ble NGT, Principal Bench, New Delhi order dated 13.09.18 and MoEF& CC O.M dated 12.12.18 for issuing of ToR to SEIAA for undertaking detailed EIA / EMP study as mentioned in Annexure VI alongwith following specific condition :-

- I. In compliance of OM no.F.No. IA3-22/3/2024-IA.III (E-241594) dated 24.07.2024 of MoEF&CC, Govt. of India plantation of saplings shall be carried out in the earmarked green belt area as the part of tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). 10% of the total green belt proposed shall be allocated under this clause.
- II. Environmental Management Plan to be prepared and incorporated in the final EIA / EMP report w.r.t. Seasonal Nala situated nearby to proposed ML area.

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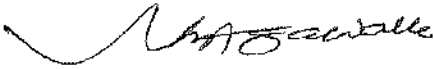
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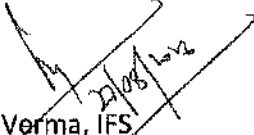
The meeting concluded with thanks to all present.

Ashok Kumar Dubey, IFS (Retd.)
Member


Dr. Ajay Govind Bhatt
Member


Niranjan Lal Agarwalla
Member


Dr. Raju Kumar
Member


Srikanth Verma, IFS
Member Secretary

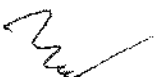

Ashok Kumar Singh, IFS (Retd.)
Chairman

I. Statutory compliance

- i. This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- ii. In the writ petition (Civil) no. 202/1995, T.N. GodavermanThirumulpadvs union of India and ors. TheHon'ble Supreme Court passed an order dated 03.06.2022 " National Park or Wildlife Sanctuary must have an ESZ of minimum 01 km in which the activities proscribed and prescribed in the guidelines of 09th February, 2011 shall be strictly adhered to ".
- iii. The Project proponent complies with all the statutory requirements and judgement of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors before commencing the mining operations.
- iv. The Hon'ble Supreme Court vide order dated 08.01.2020 in W.P. (Civil) No.114/2014 in the matter of Common Cause vs. Union of India has directed that the area which has been mined should be restored so that grass and other vegetation including trees can grow in the mining area for the benefit of animals.

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

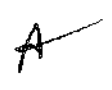
- v. The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgement of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors.
- vi. This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- vii. This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- viii. Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.



- ix. The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- x. The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- xi. The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-IAJI (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- xii. The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- xiii. A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- xiv. State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- xv. The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www. Environment clearance.nic.in](http://www.Environmentclearance.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEF& CC Regional Office for compliance and record.
- xvi. The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

II. Air quality monitoring and preservation

- i. The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical

parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2; CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCUI, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

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

III. Water quality monitoring and preservation

- i. In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- ii. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- iii. Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be

submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

- iv. The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
- v. Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IAJI (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- vi. Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.
- vii. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.



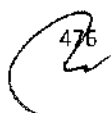
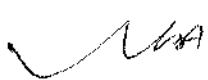
- viii. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and vibration monitoring and prevention

- i. The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- ii. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- iii. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

V. Mining Plan

- i. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.
- ii. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.



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

VI. Land reclamation

- i. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- ii. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- iii. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- iv. The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- v. The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.
- vi. Catch drains, settling tanks and ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

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- vii. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- viii. The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

VII. Transportation

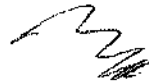
- i. No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.
- ii. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

- i. The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
- ii. The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- iii. The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- iv. The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation, if any found or reported by the competent authority. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- v. If any Wild Life Conservation Plan is prepared as per above clause no. iv, it shall be implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

- i. The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which

are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

- ii. The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- iii. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- iv. The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be



presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

- v. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- vi. Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- vii. The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

- i. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- ii. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.

XI. Miscellaneous

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

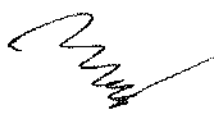
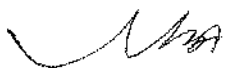
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- ii. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- iii. It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned Regional Office of MoEF& CC at Ranchi and Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi / CPCB / SEIAA.
- iv. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
- v. The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
- vi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- vii. The Ministry / SEIAA / SEAC may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- viii. The Ministry / SEIAA / SEAC reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- ix. The Environmental Clearance accorded shall be valid for the period of lease of the mine. The PP shall not increase production rate and alter lease area during the validity of Environmental Clearance
- x. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.



Environmental Safeguard provided by JSPCB

Environmental Safeguards: -

- 1) That, the occupier must provide a display board of adequate size (preferably not less than 1 m × 1 m) near the entrance of mines, mentioning the following details: -
 - a. Name of the Mines with Capacity.
 - b. Address and exact location of area with latitude and longitude of all corner points.
 - c. Name of the Proprietor with contact no.
 - d. Status of regulatory compliance status with Validity (CTE, CTO, HWA etc.).
 - e. Status of Electricity Power Supply.
- 2) That, the occupier shall construct proper Haul roads and make arrangements to maintain the same. Moreover, sufficient numbers of sprinklers should be provided along the haul road to suppress the dust emission. The concerned unit shall be responsible for installation and O & M.
- 3) That, the occupier shall do plantation in both side of the haul / approach road.
- 4) That, the occupier shall do mining activities only if, the mining lease is valid.
- 5) That, the occupier shall Submit Production figure of the Boulder duly certified by D.M.O, within consent period.
- 6) That, the occupier shall supply Stone Boulder only to those stone crusher units which have valid Consent to Operate from the Board and shall maintain record of it and show the record to the Inspecting Officer at the time of inspection.
- 7) That, the occupier shall make necessary arrangements to preserve live soil of the mine(s) and shall reclaim mined out areas by filling it (them) with over burden and live soil and shall do tree plantation over it (them). In no case soil shall be stored out of mine lease area and report to J.S.P.C. Board.
- 8) That, the occupier shall do plantation in 3 rows in the safety barrier & enhance the density of the plantation by practicing the continued plantation.
- 9) That, the occupier shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently and during loading, unloading of raw materials / products and wastes.
- 10) That, the occupier shall keep their annual production within the capacity mentioned in the Environmental Clearance accorded to the Unit.
- 11) That, the occupier shall not use any sort of explosives for mining activities without obtaining explosive license / proper permission from the Competent Authority.
- 12) That, the occupier shall make a provision for Water Wetting / Surface active agents / Covering at the product storage area and OB / Waste Storage area.
- 13) That, the occupier shall carry out mining activity at a minimum distance of 100 meter from any river / nallah etc.

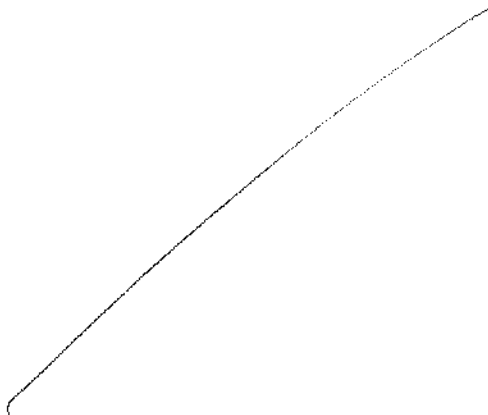
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- 14) That, the occupier shall install USEPA approved technology PM₁₀ Analyser as per CPCB guideline with onsite display and shall provide connectivity to JSPCB server.
- 15) That, the occupier shall submit Ambient Air Quality Report & Noise Level Monitoring Report prior to start of operation of the mines from the Laboratory portal of the Board.
- 16) That, the occupier shall provide information to JSPCB regarding temporary discontinuation / under suspension / closure / any incident of accident or other unforeseen act or event of the unit.
- 17) That, the occupier shall install mist fog cannon dust suppression system at dust prone areas to arrest dust particles.
- 18) That, the occupier shall ensure that haul roads / roads within the mines / industry premises used for the transportation of the products from the stone crushers or mines shall be paved and sufficient number of sprinklers be in operation. The concerned mines shall be responsible for installation and O&M.
- 19) That, the occupier shall abide by the conditions & shall confine to the production as per the year wise production capacity mentioned in the Environmental Clearance accorded to the Unit.
- 20) That, the occupier shall ensure that the stone dusts from the stone crushing / mines are not dumped in the nearby areas and may be utilized for construction activities of the highway and Bridges in the area and filling up the ponds / mine voids which were created during the stone mining or reclamation of the stone mines.
- 21) That, the occupier shall mandatorily obtain Consent to Operate (CTO) and Hazardous Waste Authorization from the Board before start of operation of the Unit.



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Environmental Safeguard provided by JSPCB

Environmental Safeguards: -

- 1) That, the occupier must provide a display board of adequate size (preferably not less than 1 m x 1 m) near the entrance of mines, mentioning the following details: -
 - a. Name of the Mines with Capacity.
 - b. Address and exact location of area with latitude and longitude of all corner points.
 - c. Name of the Proprietor with contact no.
 - d. Status of regulatory compliance status with Validity (CTE, CTO, HWA etc.).
 - e. Status of Electricity Power Supply.
- 2) That, the occupier shall construct proper Haul roads and make arrangements to maintain the same. Moreover, sufficient numbers of sprinklers should be provided along the haul road to suppress the dust emission. The concerned unit shall be responsible for installation and O & M.
- 3) That, the occupier shall do plantation in both side of the haul / approach road.
- 4) That, the occupier shall do mining activities only if, the mining lease is valid.
- 5) That, the occupier shall Submit Production figure of the Boulder duly certified by D.M.O, within consent period.
- 6) That, the occupier shall supply Stone Boulder only to those stone crusher units which have valid Consent to Operate from the Board and shall maintain record of it and show the record to the Inspecting Officer at the time of inspection.
- 7) That, the occupier shall make necessary arrangements to preserve live soil of the mine(s) and shall reclaim mined out areas by filling it (them) with over burden and live soil and shall do tree plantation over it (them). In no case soil shall be stored out of mine lease area and report to J.S.P.C. Board.
- 8) That, the occupier shall do plantation in 3 rows in the safety barrier & enhance the density of the plantation by practicing the continued plantation.
- 9) That, the occupier shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently and during loading, unloading of raw materials / products and wastes.
- 10) That, the occupier shall keep their annual production within the capacity mentioned in the Environmental Clearance accorded to the Unit.
- 11) That, the occupier shall not use any sort of explosives for mining activities without obtaining explosive license / proper permission from the Competent Authority.
- 12) That, the occupier shall make a provision for Water Wetting / Surface active agents / Covering at the product storage area and OB / Waste Storage area.

- 13) That, the occupier shall carry out mining activity at a minimum distance of 100 meter from any river / nallah etc.
- 14) That, the occupier shall install USEPA approved technology PM₁₀ Analyser as per CPCB guideline with onsite display and shall provide connectivity to JSPCB server.
- 15) That, the occupier shall submit Ambient Air Quality Report & Noise Level Monitoring Report prior to start of operation of the mines from the Laboratory portal of the Board.
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- 18) That, the occupier shall ensure that haul roads / roads within the mines / industry premises used for the transportation of the products from the stone crushers or mines shall be paved and sufficient number of sprinklers be in operation. The concerned mines shall be responsible for installation and O&M.
- 19) That, the occupier shall abide by the conditions & shall confine to the production as per the year wise production capacity mentioned in the Environmental Clearance accorded to the Unit.
- 20) That, the occupier shall ensure that the stone dusts from the stone crushing / mines are not dumped in the nearby areas and may be utilized for construction activities of the highway and Bridges in the area and filling up the ponds / mine voids which were created during the stone mining or reclamation of the stone mines.
- 21) That, the occupier shall mandatorily obtain Consent to Operate (CTO) and Hazardous Waste Authorization from the Board before start of operation of the Unit.
- 22) That, the occupier shall install dry fog mist type water sprinklers to suppress the fugitive dust emission from crushers & plying of heavy vehicles.
- 23) That, the occupier shall cover screen and crusher with steel sheet or such other material, cover the free fall of stone chips and dusts with steel ring fitted rubber chute and shall cover the point from all sides (except material exit side) by wind breaking wall of suitable height.
- 24) That, the proponent shall store all raw materials and products under shed and shall, as far as practicable, do their processing and transfer under full proof cover(s) and shall install dust catchers over uncovered space of processing and transfers.
- 25) That, the occupier shall construct wind breaking wall of 10 ft. height all along the crusher site.
- 26) That, the occupier shall install dust containment cum suppression system of the equipment.

- 27) That, the occupier shall submit photographs to establish the compliance of the aforesaid conditions at the time of submission of CTO application.
- 28) That, the grant of this Consent to Establish shall be subject to regulations / conditions of the Eco sensitive Zone, notified or to be notified in future under EP Act, for any Protected Area (National Park, Wildlife Sanctuary, etc.).
- 29) That, the application for CTO will be entertained only after full compliance of conditions pertaining to arrangements for control / mitigation of air pollution such as boundary wall, wind breaking wall, water sprinklers, pucca roads, peripheral plantation and maintenance of tree species for creating green screen, etc.
- 30) That, the proponent shall carry out transportation of stone boulders / chips in fully covered transport vehicles.
- 31) That the occupier shall install Flexible Telescopic chute from top of discharge point to the ground level should be provided.
- 32) That the occupier shall ensure that the conveyor belts should be properly covered from node to node with a thick sheet of suitable material along with water sprinkling system.
- 33) That the occupier shall ensure that the crushing units (both primary & secondary) should be placed in a covered section and the crushing units having capacity more than 100 TPH, shall be provided with bag house as emission control system.
- 34) That, the occupier shall install USEPA approved technology PM 10 analyser as per CPCB guideline with onsite display and shall provide connectivity to JSPCB server.



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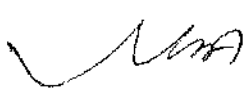
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The bottom of the page features several handwritten signatures and initials. From left to right, there is a large, stylized signature, a smaller 'A' shaped mark, a circled '496' with a checkmark, a simple 'A' mark, and a large, complex signature on the far right.

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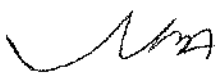
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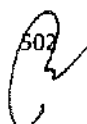


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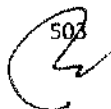
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- 13) That, the occupier shall carry out mining activity at a minimum distance of 100 meter from any river / nallah etc.



- 14) That, the occupier shall install USEPA approved technology PM₁₀ Analyser as per CPCB guideline with onsite display and shall provide connectivity to JSPCB server.
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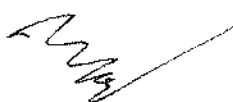
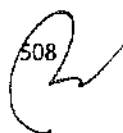
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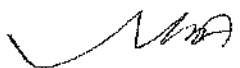
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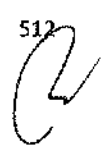
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- 22) That, the occupier shall Completely dismantle/ remove the existing stone crusher from the proposed Mining Lease area before Commencement of any mining operation under the proposed project as per the Notarized affidavit submitted by the unit before applying for CTO.

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The TORs prescribed for undertaking detailed EIA study are as follows:

1. The EIA Report shall be prepared for MTPA rated capacity in an ML / project area of ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
2. An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season except monsoon.
3. A map specifying locations of the State, District and Project location should be provided.
4. A Study area map of the core zone and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
5. Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
6. Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
7. A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
8. A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.

9. In case of any proposed diversion of nallah/canal/river, the proposed route of diversion /modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and Flood Control Department of the concerned state.
10. Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map.
11. Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

Land use details for opencast project should be given as per the following table :

S. N.	Land use	Within ML area	Outside ML area	Total
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			
4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			

12. Break-up of lease/project area as per mining operations should be provided.
13. Impact of changes in the land use due to the project, if much of the land being acquired is predominantly agricultural land/forestland/grazing land.
14. One-season (non-monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
15. Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources should be provided. The number and location of the stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Values should be provided based on desirable limits.
16. Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora fauna and, or if the area is occasionally visited or used as a habitat by Schedule-I fauna, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan should be prepared and submitted with EIA-EMP Report; and comments from the CWLW of the State Govt. should also be obtained and furnished.

17. Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included.
18. Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
19. Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
20. Detailed water balance along with flow chart should be provided. The break-up of water requirement for the various mine operations should be given separately.
21. Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users should be given.
22. Impact of mining and water abstraction use in mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
23. Impact of blasting, noise and vibrations should be given.
24. Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
25. Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
26. Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP / Silo entirely wagons and into trucks / tippers.
27. Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
28. Efforts be made for maximizing progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void,-- to reduce land degradation.

29. Impact of change in land use from mining operations and whether the land can be restored to agriculture use post mining.
30. Progressive Green belt and Ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEF&CC given below) and selection of species (native) based on original survey/land use should be given.
31. Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the status of pre- mining should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of rehandling (wherever applicable) and backfilling and progressive mine closure and reclamation should be detailed.

Table 3 : Post-Mining land use pattern of ML / Project area (ha)

Land use during mining	Land use (ha)				
External OB dump	Plantation	Water body	Public use	Undisturbed	Total
Top soil dump					
Excavation					
Roads					
Built up area					
Green belt					
Undisturbed area					
	Total				

32. Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be accorded ?.
33. Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
34. Risk Assessment and Disaster Preparedness and Management Plan should be provided.
35. Integration of the Environmental Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
36. Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
37. Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

38. CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
39. Corporate Environment Responsibility:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
40. Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
41. In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
42. Status of any litigations/ court cases filed/pending on the project should be provided.
43. Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
44. Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

Details on the Forest Clearance should be given as per the format given :

Total ML / Project area (ha)	Total forest land (ha)	Date of FC	Extent of forest land	Balance area for which FC is yet to be obtained	Status of application for diversion of forest land

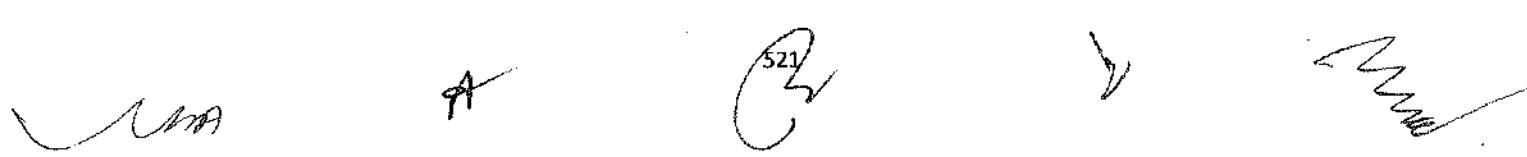
45. Besides the above, the below mentioned general points should also be followed:-
- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
 - b) All documents may be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
 - d) Where the documents provided are in a language other than English, an English translation should be provided.
 - e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
 - f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
 - g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013 /41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of SEIAA, Jharkhand with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH process again with the revised documentation.

The EIA report should also include

1. surface plan of the area indicating Contours of main topographic features, drainage and mining area.
2. geological maps and sections and
3. sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

46. The Prescribed ToRs is valid as per O.M. F. No. IA3-22/10/2022-IA.III[E177258], dated 08.06.2022 of MoEF&CC, Govt. of India.

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The TORs prescribed for undertaking detailed EIA study are as follows:

A. Standard Terms of Reference

1. Executive Summary

2. Introduction

- i. Details of the EIA Consultant including NABET accreditation.
- ii. Information about the project proponent
- iii. Importance and benefits of the project

3. Project Description

- i. Cost of project and time of completion.
- ii. Products with capacities for the proposed project.
- iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
- iv. List of raw materials required and their source along with mode of transportation.
- v. Other chemicals and materials required with quantities and storage capacities
- vi. Details of Emission, effluents, hazardous waste generation and their management.
- vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
- viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided
- ix. Hazard identification and details of proposed safety systems.
- x. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per OM no. F.no. IA3-22/10/2022-IA.III [E 177258], dated 08th June, 2022 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing / existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification, 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. Site Details

- i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Details w.r.t. option analysis for selection of site
- iv. Co-ordinates (lat-long) of all four corners of the site. .
- v. Google map-Earth downloaded of the project site.
- vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- x. Geological features and Geo-hydrological status of the study area shall be included.
- xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xiii. R&R details in respect of land in line with state Government policy

5. Forest and wildlife related issues (if applicable):

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
- ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro- meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

- ii. Water Quality modelling - in case of discharge in water body
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control.
- vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 2500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

- i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

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- iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

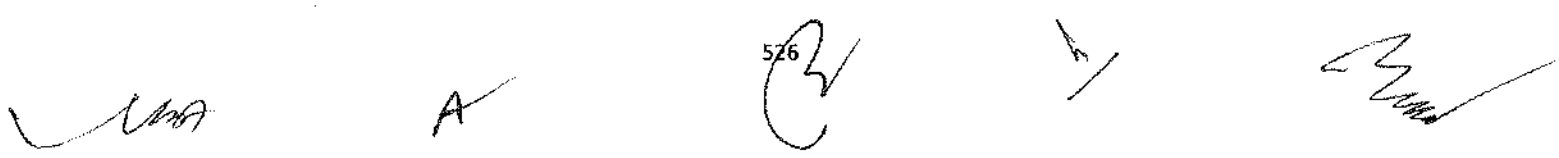
11. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provision to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

12. Enterprise Social Commitment (ESC)

- i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
- 13. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.**

14. A tabular chart with index for point wise compliance of above TOR.

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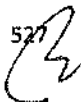


B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR METALLURGICAL INDUSTRIES (FERROUS & NON FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Details on blast furnace/ open hearth furnace/ basic oxygen furnace/ ladle refining, casting and rolling plants etc.
3. Details on installation/activation of opacity meters with recording with proper calibration system
4. Details on toxic metals including mercury, arsenic and fluoride emissions
5. Details on stack height requirement for integrated steel
6. Details on ash disposal and management -Non-ferrous metal
7. Complete process flow diagram describing production of lead/zinc/copper/ aluminium, etc.
8. Raw materials substitution or elimination
9. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
10. Details on Holding and de-gassing of molten metal from primary and secondary aluminum, materials pre-treatment, and from melting and smelting of secondary aluminium
11. Details on solvent recycling
12. Details on precious metals recovery
13. Details on composition, generation and utilization of waste/fuel gases from coke oven plant and their utilization.
14. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
15. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
16. Trace metals in waste material especially slag.
17. Plan for trace metal recovery
18. Trace metals in water

C. Other

1. Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of SEIAA, Jharkhand with reasons for such changes and permission should be sought, as the TOR may also have to be altered.
2. The Prescribed ToRs is valid as per O.M. F. No. IA3-22/10/2022-IA.III[E177258], dated 08.06.2022 of MoEF&CC, Govt. of India.



I. Statutory Compliance

- i. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
- ii. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment etc as per National Building Code including protection measures from lightening etc.
- iii. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- iv. In the writ petition (Civil) no. 202/1995, T.N. GodavermanThirumulpad vs union of India and ors. the Hon'ble Supreme Court passed an order dated 03.06.2022 " National Park or Wildlife Sanctuary must have an ESZ of minimum 01 km in which the activities prescribed and prescribed in the guidelines of 09th February, 2011 shall be strictly adhered to ".
- v. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- vi. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- vii. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
- viii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- ix. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
- x. The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- xi. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

- xii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.
- xiii. Provision of drinking water, waste water disposal, solid wastes management and primary health facilities shall be ensured for labour force. Proper sanitation facilities shall be provided at the construction site to prevent health related problems. Domestic as well as sanitary wastes from construction camps shall be cleared regularly.
- xiv. All the labourers to be engaged for construction works shall be screened for health and adequately treated before issue of work permits. The contractor shall ensure periodic health check-up of construction workers.
- xv. All vehicles/equipment deployed during construction phase shall be ensured in good working condition and shall conform to applicable air and noise emission standards. These shall be operated only during non-peak hours.
- xvi. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xvii. Water during construction phase should be preferred from Municipal supply.
- xviii. Unskilled construction labourers shall be recruited from the local areas.
- xix. Monitoring of ground water table and quality once in three months shall be carried out. Construction of tube wells, bore wells shall be strictly regulated.
- xx. Adequate provision shall be made to cater the parking needs. Parking spaces standards as given in "Manual on Norms and Standards for Environmental Clearance of Large Construction Projects" issued by Ministry of Environment and Forests, Government of India shall be adopted.
- xxi. Rest room facilities shall be provided for service population.
- xxii. Water body falling within premises (if any) shall not be lined or no embankment shall be cemented. The water bodies, if any, shall be kept in natural conditions without disturbing the ecological habitat.
- xxiii. Construction shall conform to the requirements of local seismic regulations. The project proponent shall obtain permission for the plans and designs including structural design, standards and specifications of all construction work from concerned authority.

II. Air quality monitoring and preservation

- i. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
- ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.

- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM25) covering upwind and downwind directions during the construction period.
- iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
- vii. Wet jet shall be provided for grinding and stone cutting.
- viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
- ix. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules 2016.
- x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
- xi. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
- xii. For indoor air quality the ventilation provisions as per National Building Code of India.

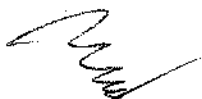
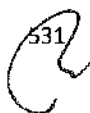
III. Water quality monitoring and preservation

- i. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and



other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.

- ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
- iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
- iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
- v. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- vi. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
- vii. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
- viii. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
- ix. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
- x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- xi. The local bye-law provisions on rain water harvesting should be followed. If local byelaw provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
- xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be



harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.

- xiii. All recharge should be limited to shallow aquifer.
- xiv. No ground water shall be used during construction phase of the project.
- xv. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
- xvi. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
- xvii. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
- xviii. No sewage or untreated effluent water would be discharged through storm water drains.
- xix. Onsite sewage treatment of capacity of treating 100% waste water to be installed based on the MBBR/MBR/SBR technology. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
- xx. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
- xxi. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention

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

- ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures

- i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
- ii. Outdoor and common area lighting shall be LED.
- iii. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
- iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
- v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- vi. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

VI. Waste Management

- i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
- ii. Disposal of muck during construction phase shall not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- iii. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.



- iv. Organic waste compost/ Vermiculture pit/ Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
- v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
- vi. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
- vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.
- viii. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016., Ready mixed concrete must be used in building construction.
- ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.
- x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover

- i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- ii. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.
- iii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- iv. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled

appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

VIII. Transport

- i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
 - a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
 - b. Traffic calming measures.
 - c. Proper design of entry and exit points.
 - d. Parking norms as per local regulation
- ii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
- iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

IX. Human Health Issues

- i. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
- ii. For indoor air quality the ventilation provisions as per National Building Code of India.
- iii. Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Occupational health surveillance of the workers shall be done on a regular basis.
- vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

XI. Miscellaneous

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as



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prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- vi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry / SEIAA / SEAC may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry / SEIAA / SEAC reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned Regional Office of MoEF& CC at Ranchi and Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi / CPCB / SEIAA.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.
- xvi. The Prescribed EC is valid as per Notification no. S.O. 1807(E) dated 12.04.2022 of MoEF&CC, Govt. of India.



The TORs prescribed for undertaking detailed EIA study are as follows:

A. Standard Conditions :

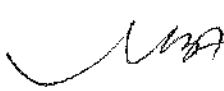
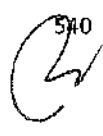
1. Examine details of land use as per Master Plan and land use around 10 km radius of the project site Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
2. Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/villages and present status of such activities.
3. Examine baseline environmental quality along with projected incremental load due to the project.
4. Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
5. Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project.
6. Submit the details of the trees to be felled for the project.
7. Submit the present land use and permission required for any conversion such as forest, agriculture etc.
8. Submit roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
9. Ground water classification as per the Central Ground Water Authority.
10. Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
11. Rain water harvesting proposals should be made with due safeguards for ground water quality Maximize recycling of water and utilization of rain water. Examine details.
12. Examine soil characteristics and depth of ground water table for rainwater harvesting.
13. Examine details of solid waste generation treatment and its disposal.
14. Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
15. DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.



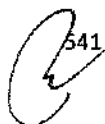
16. Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
17. A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
18. Examine the details of transport of materials for construction which should include source and availability.
19. Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
20. Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
21. Details of litigation pending or any notice received against the project, if any, with direction / order passed by any Court of Law against the Project should be given.
22. The cost of the Project (capital cost and recurring cost) the damage cost of already opened land as well as the cost towards implementation of EMP should be clearly spelt out.
23. Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measures, project proponent can refer to the model ToR available on Ministry website "<http://moef.nic.in/Manual/Townships>".
24. Any other rules / guidelines / orders issued by any competent authority shall be applicable to the project at the time of consideration of the projects for grant of EC.
25. The Prescribed ToRs is valid as per O.M. F. No. IA3-22/10/2022-IA.III[E177258], dated 08.06.2022 of MoEF&CC, Govt. of India.

The TORs prescribed for undertaking detailed EIA study are as follows:

- i. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- ii. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- iii. All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- iv. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- v. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- vi. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- vii. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- viii. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- ix. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.

- x. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- xi. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- xii. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- xiii. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- xiv. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- xv. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- xvi. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- xvii. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- xviii. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and



buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

- xix. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- xx. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- xxi. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- xxii. One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- xxiii. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be

shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

- xxiv. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- xxv. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- xxvi. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- xxvii. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- xxviii. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- xxix. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- xxx. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- xxxi. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- xxxii. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving



the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

- xxxiii. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- xxxiv. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- xxxv. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- xxxvi. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- xxxvii. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- xxxviii. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- xxxix. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- xl. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- xli. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- xl. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- xl. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- xliv. Besides the above, the below mentioned general points are also to be followed :-
 - a) Executive Summary of the EIA/EMP Report

- b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC / NABL accredited laboratories. All the original analysis / testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF & CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
 - i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
 - j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.
- xlv. After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
- xlvi. The Prescribed ToRs is valid as per O.M. F. No. IA3-22/10/2022-IA.III[E177258], dated 08.06.2022 of MoEF&CC, Govt. of India.

