

EXECUTIVE SUMMARY

“Chirang Soapstone Mining Project”

At

Village- Chirang,

Tehsil & District-Bageshwar, State- Uttarakhand

(Area- 4.85 Ha)

Submitted by

M/s Baba Bagnath Mines Chirang

R/o Village-Chirang, Tehsil & District – Bageshwar

(Uttarakhand – 263141)

Prepared by

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1.0 INTRODUCTION OF PROJECT & PROPONENT

Environmental Impact Assessment (EIA) is a decision-making tool, identifies the extent of the environmental, social and economic impacts of a project prior to decision-making. EIA systematically examines both beneficial and adverse impacts of the proposed project over and above the prevailing conditions of environmental parameters and ensure that these impacts are taken into account during the project designing stage itself and the values of the combined impacts are never allowed to exceed and remain within the statutory norms.

The proposed project of Chirang Soapstone Mining Project by M/s Baba Bagnath Mines Chirang is for soapstone mineral mining which covers an area of 4.85 Ha at Village- Chirang, Tehsil & District- Bageshwar, and Uttarakhand. LOI has been granted in favour of M/s Baba Bagnath Mines Chirang, vide letter no. 2301/VII-A-1/2021-01(49)/2021 dated 07.01.2022, for a period of 25 years. The EIA-EMP report has been prepared as per the TOR granted under the EIA Notification of September 14th 2006. In order to assess the impact on environment due to proposed mining, it is necessary to ascertain the present status of environment prevailing at the project site and identification and assessment of impacts on the environment of the proposed operations.

As per NGT Order Dated 13-09-2018 and MOEF & CC OM No L-11011/175/2018-IA-II (M) Dated 12-12-2018 the project comes under B1 Category as the area is more than 5 Ha. Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received from SEIAA, Uttarakhand, under EIA Notification of the MoEF, 355/SEIAA Dated 07 November, 2023.

Village	Tehsil	District	State	Area in Ha.
Chirang	Bageshwar	Bageshwar	Uttarakhand	4.85

1.1 LOCATION

Pillar No.	Latitude	Longitude
1	29°52'26.28"N	79°49'13.47"E
2	29°52'26.27"N	79°49'13.98"E
3	29°52'28.60"N	79°49'14.49"E
4	29°52'30.26"N	79°49'13.67"E



5	29°52'30.32"N	79°49'14.62"E
6	29°52'31.93"N	79°49'14.83"E
7	29°52'34.37"N	79°49'17.35"E
8	29°52'35.51"N	79°49'16.38"E
9	29°52'34.77"N	79°49'14.81"E
10	29°52'36.11"N	79°49'10.79"E
11	29°52'34.40"N	79°49'9.22"E
12	29°52'36.75"N	79°49'6.20"E
13	29°52'33.94"N	79°49'6.87"E
14	29°52'33.98"N	79°49'6.21"E
15	29°52'33.07"N	79°49'6.15"E
16	29°52'33.27"N	79°49'4.95"E
17	29°52'34.47"N	79°49'5.20"E
18	29°52'35.10"N	79°49'2.68"E
19	29°52'33.28"N	79°49'1.44"E
20	29°52'35.20"N	79°49'0.60"E
21	29°52'35.59"N	79°49'1.60"E
22	29°52'36.68"N	79°49'0.98"E
23	29°52'36.88"N	79°49'2.27"E
24	29°52'38.56"N	79°49'0.90"E
25	29°52'39.34"N	79°49'0.77"E
26	29°52'39.43"N	79°48'59.93"E
27	29°52'33.70"N	79°48'59.09"E
28	29°52'32.51"N	79°49'0.83"E
29	29°52'32.22"N	79°48'57.95"E
30	29°52'30.70"N	79°48'56.66"E
31	29°52'30.91"N	79°48'59.63"E
32	29°52'29.62"N	79°49'1.46"E
33	29°52'30.12"N	79°49'2.46"E
34	29°52'31.47"N	79°49'1.61"E
35	29°52'32.16"N	79°49'2.74"E
36	29°52'32.43"N	79°49'4.72"E
37	29°52'30.64"N	79°49'8.36"E
38	29°52'34.35"N	79°49'7.41"E
39	29°52'33.16"N	79°49'8.59"E
40	29°52'33.08"N	79°49'9.11"E
41	29°52'35.73"N	79°49'11.11"E
42	29°52'34.48"N	79°49'14.48"E
43	29°52'31.24"N	79°49'13.16"E
44	29°52'31.48"N	79°49'12.76"E
45	29°52'30.82"N	79°49'11.53"E
46	29°52'30.27"N	79°49'12.96"E

47	29°52'28.75"N	79°49'13.40"E
48	29°52'28.35"N	79°49'12.93"E
49	29°52'28.41"N	79°49'11.49"E
50	29°52'27.35"N	79°49'13.04"E
51	29°52'27.44"N	79°49'11.92"E

Detail of site & surrounding around Lease Area

Nearest Settlements	Chirang Village- 130 m in SSE direction
Nearest Road	National Highway (NH-309A) 3.70 km* towards S direction. MDR Road - Dofar Dharamgarh Road 0.64 km in S direction
Nearest Airport	Pithoragarh Airport, towards SE direction (51.86 km*)
Nearest Railway Station	Kathgodam Railway Station, towards SSW direction (approx. 72.43 Km*)
Water body	Saryu River approx 2.70 km in NW direction Pungar River approx 0.92 km in S direction
Nearest School/ college	Govt. Primary School – approx. 0.67 Km in SW direction Govt. Junior High School, Bheru Chaubata – approx. 2.33 Km in S direction
Nearest Hospital	District Hospital, Matiyoli, Bageshwar approx. 5.63 km in SW direction District Hospital, Dug Bazar, Kanda Road
Temple	Haru Temple– approx. 0.07 Km in S direction Bhumia Devta Temple- approx. 1.34 km in WNW direction

Project Salient features

On-line proposal No.	SIA/UK/MIN/448333/2023
File No. allotted by SEIAA, UK	EC-01/(66)/2023
Name of Proponent	M/s Baba Bagnath Mines Chirang
Full correspondence address of proponent	R/O Village Chirang, Tehsil & District – Bageshwar, U.K.- 263141
Name of Project	Chirang Soapstone Mining Project
Name of Village	Chirang
Tehsil	Bageshwar
District	Bageshwar
Name of Minor Mineral	Soapstone
Sanctioned Lease Area (in Ha.)	4.85 Ha
Category of the project	“B1”
Max & Min mRL within lease area	Max- 1374.30 mRL & 1228.80 mRL

Maximum Proposed Production	16905 TPA	
Sanctioned Period of Mine lease	Maximum 50 years	
Method of Mining	Open Cast Mechanized Method	
No. of working days	240days	
Working hours/day	8hrs	
No. of workers	32	
Type of Land	Agricultural Land	
Ultimate Depth of Mining	18 m	
Nearest metalled road from site	500 m	
Water Requirement	Purpose	Requirement (KLD)
	Drinking	0.32
	Suppression of dust	3.0
	Plantation	5.0
	Mobile Toilet	0.32
	Total	8.64
Any litigation pending against the project or land in any court	No	
Details of Lease Area in approved DSR	Yes, given in the DSR Given at Page No. 38 Serial No. 30	
Proposed Project cost	Rs 45,00,000 /-	
Proposed EMP budget including the CER Cost as per OM dated 30 Sep 2020	Recurring Cost- 3.50 Lakh Capital Cost (Including CER) – 4.25 Lakh CER Cost – 2.25 Lakh	
Length and breadth of Haul Road	Length: 300m, width: 5 m	
No. of Trees to be Planted	2500 plants	

Proposed productions in mining plan period – 05 years

Year	Quantities of soapstone (tonnes)			Total Quantities of soapstone (tonnes)	Waste (Cum)			Total Waste (Cum)	Stripping ratio (T/cum)
	Pit-I	Pit-II	Pit-III		Pit-I	Pit-II	Pit-III		
Ist	3598	2371	2246	8215	2630	1733	1642	6005	1:1.37
IInd	5408	2163	2153	9724	2872	1192	1260	5324	1:1.83
IIIrd	6474	2834	4305	13613	3030	1612	2045	6687	1:2.04
IVth	8003	3463	3692	15158	3553	2196	2277	8026	1:1.89
Vth	8798	3458	4649	16905	4396	1906	2544	8846	1:1.91
Total	32281	14289	17045	63615	16481	8639	9768	34888	

1.2 BASELINE DATA

This section contains the description of baseline studies of the 10 km radius of the area surrounding Village- Chirang, Tehsil and District- Bageshwar, Uttarakhand. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

Environmental data has been collected in relation to proposed mining for:-

- (a) Air
- (b) Noise
- (c) Water
- (d) Soil
- (e) Ecology and Biodiversity
- (f) Socio-economy

BASELINE ENVIRONMENTAL STATUS

Attribute	Baseline status
Ambient Air Quality	Ambient Air Quality Monitoring (AAQM) has been carried out at eight locations during pre-monsoon season from March to May 2023. The minimum and maximum level of PM _{2.5} recorded within the study area was in the range of 23.38µg/m ³ to 38.57µg/m ³ with the 98th percentile 38.51µg/m ³ . The minimum and maximum level of PM ₁₀ recorded within the study area was in the range of 62.3µg/m ³ to 87.26µg/m ³ with the 98th percentile 86.16µg/m ³ . The minimum and maximum concentration of SO ₂ recorded within the study area was in the range of was 5.4 µg/m ³ to 9.7µg/m ³ with the 98th percentile 9.65µg/m ³ . The minimum and maximum level of NO ₂ recorded within the study area was in the range of was 14.3µg/m ³ to 21.6µg/m ³ with the 98th percentile 21.46µg/m ³ . The results thus obtained indicate that the concentrations of PM ₁₀ , PM _{2.5} , SO ₂ and NO ₂ in the Ambient Air are well within the National Ambient Air Quality (NAAQ) standards for Industrial, Residential, Rural and other areas.
Noise Levels	Noise monitoring was carried out at 4 locations. The results of the monitoring program indicated that both the daytime and night time levels of noise were well within the prescribed limits of NAAQS, at all the four locations monitored.

Water Quality	3 Groundwater samples and 2 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500-2012. From the surface water analysis it is evident that most of the parameters of the samples comply with 'Category A' standards of CPCB Drinking water source with conventional treatment followed by disinfection.
Soil Quality	Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.05 to 7.74, which shows that the soil is alkaline in nature.
Ecology and Biodiversity	There are no Ecologically Sensitive Areas present in the study area
Traffic analysis	From the analysis it can be seen that the LOS is not Likely to change near village

1.3 AIR ENVIRONMENT

Proposed Soapstone mine where emissions of Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) contributed by vehicles movement were considered marginal as branded make and vehicles with PUC certificate will be operated only. Fugitive dust and particulates are major pollutants which will occur in the mining activities. The trucks and tippers are well maintained so that exhaust smoke does not contribute abnormal values of noxious gases and un-burnt hydrocarbons.

Control of Fugitive Emissions

- Use of Personal Protection Equipment's (PPE) like dust masks, ear plugs etc. by the mine workers.
- No Blasting will be done.
- Regular water sprinkling on haul roads & loading points will be carried out.
- Development of green belt/plantation around the lease boundary, roads, dumps etc.
- Ambient Air Quality Monitoring will be conducted on regularly basis to assess the quality of ambient air.

Prevention and control of Gaseous Pollution

- In mining activities, the sources of gaseous emissions would be through truck movements
- Proper maintenance of vehicles improves combustion process & makes reduction in the

pollution. Good maintenance and monitoring of fuel and oil will not allow significant addition in the gaseous emission.

- All the vehicles used will have PUC certificate.
- Vehicles carrying mineral will be covered with tarpaulin sheet. This will prevent dust emission.

1.4 WATER ENVIRONMENT

Damage in the water body, depends on its assimilative capacity. Mining of soapstone does not have any significant impact on the water quality and parameters as the mining does not intercept with the ground water level. In this project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water from the river. There will not be any adverse impact on surface hydrology and ground water regime due to this project. The water collected in the mine during monsoon season will be extracted with the help of pump & will be drained in nearby water body with the help of tankers approach road and area demarcated by gram panchayat. Thus, the project activities shall not have any adverse effect on the physical components of the environment and therefore may not have any effect on the recharge of ground waters or affect the water quality.

(a) Impact on Water Resources& Surface Water Resources:

The topography of the area will not be largely changed in view of the proposed concurrent reclamation. No surface water body exists and passes through the lease area. During the mining activity period, there is a possibility of mixing of freshly disturbed material with the rain water. To take care of such events, retaining walls have been provided along the backfilled pits and along the soil and inter-burden dumps. Before the commencement of rain all the mining pits shall be backfilled so that rain water does not accumulate in the mining pits. Rain water will be channelized along the slopes it shall not carry suspension to natural streams.

1.5 NOISE ENVIRONMENT

Anticipated impacts and evaluation

Noise generated at the mine is due to semi-mechanized mining operations, mechanized loading and truck transportation activities. The noise generated by the mining activity dissipates within the mine. However, pronounced effect of above noise levels is felt only near the active working area.

The impact of noise on the villages is negligible as the villages are far located from the mine workings. Since there is no involvement of machinery, the impact of noise levels will be minimal.

(a) Noise Abatement and Control

In this mine the noise level will be up to tolerable limit (70 dB (A)) and the noise level can be reduced by:

- Proper maintenance, oiling and greasing of transport vehicles at regular intervals
- Adequate silencers will be provided in all the diesel engines.
- Plantation along the sides of approach roads, around office building and mine area will be done to minimize the propagation of noise.
- Personal Protective Equipment's (PPE) like earmuffs/earplugs will be provided to all operators and employees working near mining machineries or at higher noise zone.
- Periodical noise level monitoring will be done

1.6 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Budget allotted for the Environmental Management Plan

EMP BREAK UP			
Environment Management Plan (EMP)		Capital Costs in (Rs.)	Recurring Cost
1.	Haulage Road Repair & Maintenance Annual 500 m (L) x 5 m (W)=2500m ²		1,00,000
2.	Water Sprinkling on Haulage Road for Dust Suppression		1,00,000
3.	Environmental Monitoring & Compliances. (Half Yearly Submission of Compliances)		1,00,000
4.	Plantation along the road side & post plantation care (500 plants per year)	1,00,000 Plantation@200/sapling	50,000

5.	Corporate Social Responsibility	2,25,000	
6.	Mule Waste (Distribution of mule waste to nearby Biogas beneficiaries)	1,00,000	
Total (Rs)		4,25,000 Lakh	3,50,000 Lakh

1.7 BENEFIT OF MINING

➤ PHYSICAL BENEFITS

The impact on the civic amenities will be substantial after the commencement of mining activities. The basic requirement of the community needs will be strengthened by extending health care, educational facilities developed in the township to the community, providing drinking water to the villages, building/strengthening of existing roads in the area. The proponent will initiate the above amenities either by providing or by improving the facilities in the area, which will help in uplifting the living standards of local communities. Medical facilities will be provided in the form of first-aid facility at the mine. These medical facilities will also be available to local people in the surrounding in case of emergencies.

➤ SOCIAL BENEFITS

- Generation of employment and improved standard of living;
- Increased revenue to the State by way of royalty, taxes and duties; and
- Superior communication and transport facilities etc.
- There will be significant change in the socio-economic scenario of the area.
- The proposed project will enhance the prospects of employment. Recruitment for the unskilled and semiskilled workers for the proposed project will be from the nearby villages.
- The development of the basic amenities viz. roads, transportation, electricity, drinking water, proper sanitation, educational institutions, medical facilities, entertainment, etc. will be developed as far as possible.
- Overall, the proposed project will change living standards of the people and improve the socio-economic conditions of the area.

ENVIRONMENTAL BENEFITS

➤ Enhancement Of Green Cover

The greenbelt development plan aims to overall improvement in the environmental conditions of the region. Plantation/afforestation will be done as per program 2500 plants will be planted along the approach road and area demarcated in van panchayat land after consultation & permission of concerned authority within 5km from lease boundary along with provision for maintenance for 5 years. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people will also be involved. The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains.

1.8 CORPORATE SOCIAL RESPONSIBILITY

Budget allotted for Corporate Environmental Responsibility

S no.	Activity	Quantification	Capital cost
1	Maintenance of Temple	1	75,000
2	Distribution of street lights	5	50,000
3	Installation of benches and maintenance in school	-	1,00,000
Total			2,25,000

1.9 CONCLUSIONS

- The mining operations will meet the compliance requirements of MoEF & CC;
- Community impacts will be beneficial, as the project will generate significant economic benefits for the region;
- Adoption of Best Available Technology and Best Management Practices with more environmental friendly process
- With the effective implementation of the Environment Management Plan (EMP) during the mining activities, the proposed project can proceed without any significant negative impact on environment.