SUMMARY ON

Draft

ENVIRONMENT IMPACT ASSESSMENT/
ENVIRONMENT MANAGEMNET PLAN

(As Per EIA Notification No. S.O. 1533(E) dated 14th September 2006

Ghungur Bauxite Block-I

Villages - Ghungur, Taluka –Shahuwadi,
District –Kolhapur, State - Maharashtra
Peak production capacity – 1,80,000 TPA
Mining Lease Area 14.24 Ha (Forest Land)
(Project Category 'B')

Submission for

PUBLIC HEARING

to

MAHARASHTRA POLLUTION CONTROL BOARD

PROJECT PROPONENT

Shree Bhairavnath Earth Movers & Company

Mohite House, 240/B, General Thorat Marg,
Tarabai Park, Kolhapur,
Maharashtra-416003

EIA Consultant

Srushti Seva Private Limited

NABET Accredited EIA Consultant Organization
Certificate No. NABET/EIA/21-24/SA 0229

JANUARY 2025

SUMMARY OF EIA/EMP

1.0 INTRODUCTION:

The Ghungur Bauxite Block-I Mining Project is located in village Ghungur of Shahuwadi Taluka of Kolhapur District, Maharashtra. The area of the applied lease is 14.24 Ha. The entire applied area is forest land. This 14.24 Ha area comes under Gat No. 685 (Part) of Ghungur RF. Application for diversion of forest land for non-forest purpose has been submitted by Project Proponent to the Competent Authority.

The Government of Maharashtra issued the Letter of Intent (LOI) vide Letter No. MMN- 1220 / C.R.53 /Ind-9(B) dated 21-07-2022 for grant of Mining Lease for Ghungur Bauxite Block-I of 14.24 Ha to M/S Shree Bhairavnath Earth Movers & Company.

The project proponent has proposed 1,80,000 TPA of Bauxite having ML area of 14.24 Ha. The proposal of such nature requires mandatory Environment Clearances as per EIA Notification dated 14th September, 2006. As per this Notification the project falls under Mining of Minerals Category "B" project. Accordingly, the proposal will be apprised at State Level Authority.

The Mining Plan for the Project has been approved by the Indian Bureau of Mines (IBM) vide Letter No. MP/MECH-03(MAH)/GOA/2019-20 dated 31-07-2020. The Project envisages mining of Bauxite production @ 1,80,000 TPA. The life of mine will be 5 years. The envisaged Project Capital Cost is Rs. 219 Lakhs.

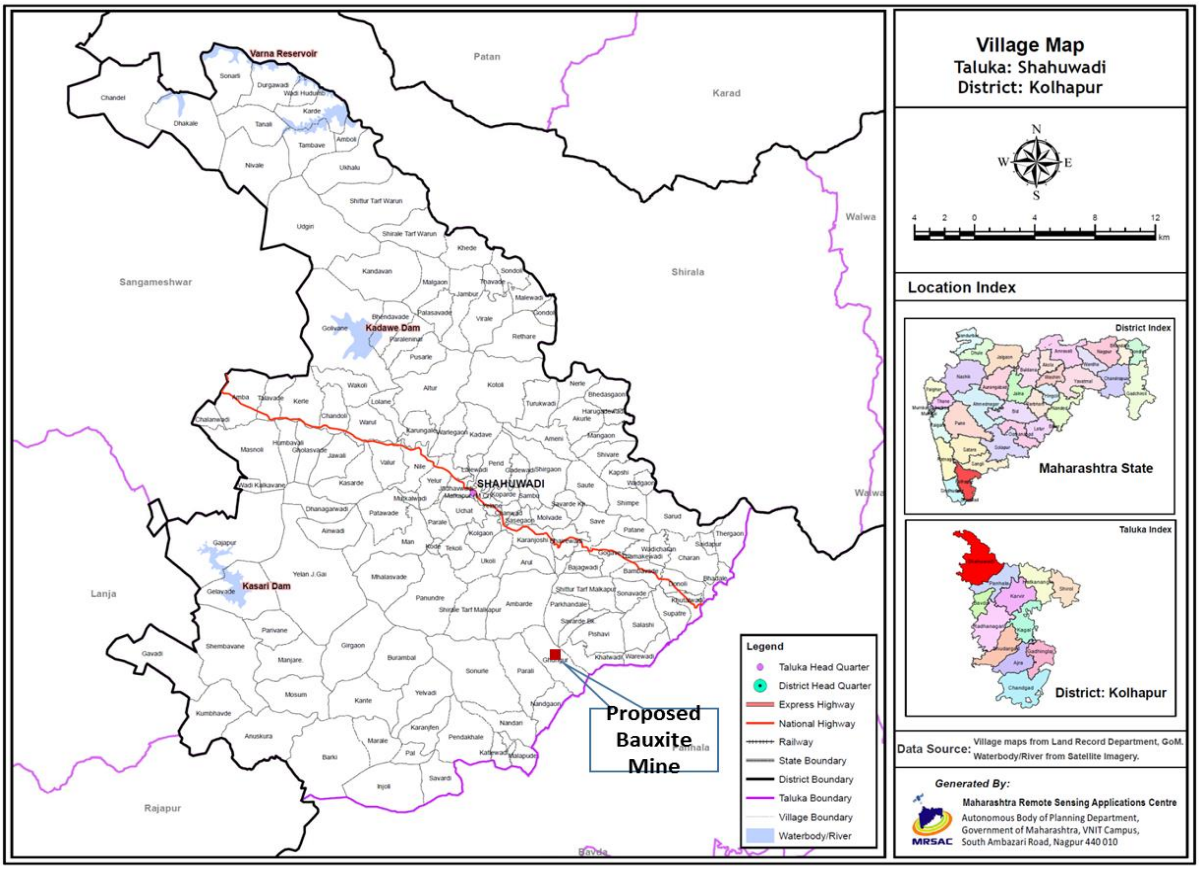
This Draft EIA/EMP Report has been prepared in accordance with the ToR issued by SEIAA, Maharashtra on 10.11.2023. The Draft EIA/EMP is being submitted to Maharashtra Pollution Control Board for conduction of Public Hearing, as per the provisions of EIA Notification 2006 and amendments thereof.

2.0 PROJECT DETAILS:

Location : The proposal Ghungur Bauxite Block-I Mining Project is located in village Ghungur of Shahuwadi Taluka of Kolhapur District, Maharashtra and falls in SOI Toposheet No. 47H/13. The bounding coordinates of the mine lease area lies between 16^0 49' 28.89"N to 16^0 50' 02.58"N and longitudes 73^0 58' 40.38"E to 73^0 59' 03.80"E**.**

Accessibility: The lease area is accessible from Ghungur Village as well as Khotwadi through village tracks. M/s Shree Bhairavnath Earth Movers would have to develop road for smooth and proper approach to the lease area after obtaining necessary permissions from all the

concerned. The lease area is located at a distance of about 6.20 Kms from the Kolhapur – Ratnagiri State Highway (NH-166) in south direction.



(Source: MRSAC Map)

Location of the Project

Project Area & Land Requirement: The Project Area is 14.24 Ha, which is entirely Forest land. There is no human settlement within the proposed mining lease area and hence the Project does not involve shifting of villages or household located within the Project Area.

3.0 MINING DETAILS:

Mining Method: The mining will be carried out by opencast mechanized mining method will be adopted with the deployment of machines like Compressor, Hydraulic excavators & Tippers etc. No drilling blasting will be done during entire period of mine operation.

4.0 BASE LINE ENVIRONMENTAL STATUS:

The Base Line Environmental quality data for various components of environment viz. Air, Noise, Water, Soil and Socio-Economic were generated during March to May 2022 for a period of 13 weeks covering 10 Kms around the Ghungur Bauxite Block-I. Other environmental data on Flora and Fauna, Land Use Pattern, Forest etc. were also generated through field surveys and also collected from different State Government Departments.

- **Air Environment**

Air Quality Monitoring was carried out at 12 Stations consisting 1 Sampling Stations within the Core Zone (Project Area) and 11 Sampling Stations in Buffer Zone (10 Kms around Core Zone). Parameters of twelve air pollutants viz. PM_{10}, $PM_{2.5}$, Sulphur Dioxide (SO_2), Oxides of Nitrogen (NO_X), Ozone (O_3), Carbon Monoxide (CO) and Heavy Metals were monitored. These parameters were included for representing baseline status of ambient air quality within the Study Area.

Results & Discussion: On the basis of observations the parameter wise result of monitored parameters are discussed below compared with National Ambient Air Quality Standards.

Particulate Matter (PM10): The maximum PM_{10} concentration covering all the air quality monitoring stations i.e. A-1 to A-12 were observed in the range of 45.7 to 55.8 µg/m^3. Almost all the stations have PM10 concentrations less than half of 24 hours average permissible limit i.e. 100 µg/m^3 as prescribed by MoEF &CC for industrial, residential, rural and other area.

Particulate Matter (PM2.5): The maximum $PM_{2.5}$ concentration covering all the air quality monitoring stations A-1 to A-12 were observed in the range of 23.1 to 30.6 µg/m^3 as against the NAAQ Standards of MoEF & CC prescribed limit of 60 µg/m^3 for industrial, residential, rural and other areas.

Sulphur Dioxide (SO2): The maximum SO_2 concentrations covering all sampling stations A-1 to A-12 were in the range of 10.2 to 16.2 µg/m^3. All monitored stations have SO^2 concentrations well within the stipulated (annual 24 hours) limit of 80µg/m^3 as prescribed for industrial, residential, rural and other areas under revised NAAQ Standards of MoEF&CC.

Oxides of Nitrogen (NOx): The maximum NOx concentrations covering all sampling stations A-1 to A-12 were observed in the range of 14.6 to 20.1 µg/m^3. All monitored stations have NOX concentrations well within the stipulated (annual 24 hours) limit of 80µg/m^3 as prescribed for industrial, residential, rural and other areas under NAAQ Standards of MoEF&CC.

Heavy Metals: Representative samples from all sampling stations were collected and analyzed for heavy metals i.e. Lead, Arsenic & Nickel. The concentrations of heavy metals were observed **below detectable limit** at all the stations**.**

Free Silica: A few samples of PM_{10} were analyzed for free silica which was found to be below detection limit.

Noise : Baseline noise levels were measured at twelve (12) locations during day time and night time and varied from 33.8 to 50.8 dB (A) were well within the prescribed limits for residential area.

Water: In all 5 surface and 5 ground water sampling stations were selected in the study area and samples were collected and analysed for relevant water quality parameters. The results of analysis are in brief, are presented below.

- The pH values of all ground water samples ranged between 7.1 and 7.8, whereas those of surface water samples varied between 7.0 and 8.1. These values are within the

acceptable pH range of 6.5 to 8.5 as per 10500:2012 standards for ground water and 8.5 as per IS-2296 (Class C) for Surface water.

- All surface water samples showed dissolved oxygen levels ranging from 5.2 to 6.4 mg/l which is good as expected.
- All ground water samples showed total dissolved solids concentration from 111 to 415 mg/l which are below permissible limit of 500 mg/l as per IS 10500:2012 for ground water samples whereas all surface water samples showed total dissolved solids ranging from 107 to 358 mg/l are also below permissible limit of 1500 as per IS 2296 (Class C) for Surface Water.
- The chloride concentrations in all ground water samples were 15.9 TO 37.7 mg/L and 19.9 to 46.8 mg/L in surface water respectively which is below acceptabe limit of 600 mg/L as per IS-2296 (Class C) for Surface water. All ground water values are below acceptable limit of 250 mg/L
- The sulphate concentrations in all ground water samples were 1.6 to 26.8 mg/L, and 5.2 to 23.4 mg/L in surface water respectively which is below permissible limit of 400 mg/L as per IS-2296 (Class C) for Surface water. These values are also below aceptable limit of 200 mg/L as prescribed in IS 10500:2012.
- All ground water samples showed hardness values ranging from 80 to 172 mg/L which are below permissible limit of 600 mg/L as prescribed in IS 10500:2012. All surface water samples showed hardness values ranging from 20 to 168 mg/L.
- In summary, overall quality of water samples indicated that the water quality of all the sources is satisfactory of the area are not polluted except the surface water samples which showed bacteriological contamination possibly from surface run-off.

Soil: Soil samples were collected at 5 selected locations in the study area to assess the existing soil conditions around the mine. In general all soils have moderate fertility are suitable for cultivation of arable crops.

Biological Environment: The core and buffer zones included the village settlements, cultivated fields, forest areas as well as wasteland. A detailed inventory of floral and faunal assemblage of the core and buffer zone was carried out and the details of flora and fauna are provided in Draft EIA/EMP. National Park, Wildlife sanctuary, defense installation or sensitive area are not located within 10 km radius of the mine.

Social Environment: As per census 2011 demographic characteristics of the study area are represented by a number of criteria, namely population composition, sex ratio, family structure, and age distribution pattern.

The 64 inhabited villages in study area have a population of 98,150 comprising of 50,081 males and 48,069 females. As may be observed from the graph below the composition of the society as far as males and their counterpart female is concerned indicates healthy distribution.

Topography and Drainage : The area forms part of Western Ghats consisting of hill ranges capped by flat plateau and dissected gorges. The plateau almost trends east to West to Southeast. The top of the plateau, south of Kalkewadi, which rises to a height of 989 m.

above MSL, is a flat table land having scanty vegetation. The entire drainage pattern in area is of dendritic type.

5.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

- **Impact on Climate:** The proposed Project is not expected to have any major irreversible impact on the climatological features like temperature, rainfall, wind speed, humidity etc.

- **Impact on Drainage:** Due to mining activities proposed on the plateau top, the runoff rate will be reduce temporarily at the top.

- **Impact on Land Use:** The proposed opencast Bauxite will result in change of the land use pattern of the Mining Lease Area. The land degradation is expected during mining activities of excavation, overburden dumps, mineral Storage etc.

- **Impact on Soil:** Though not significant, but the soil erosion may get accelerated on areas where the overburden will be dumped. As there is neither a toxic effluent nor solid waste from the mines, quality of soil is not expected to be adversely affected. impact on soil will be localized i.e. around the mine site.

- **Impact on Air Quality due to Mining:** The movement of vehicles and machineries may adverse effect the air quality within Core zone. In order to estimate the ground level concentrations, due to the emission from the proposed increase in production, EPA approved Industrial Source Complex AERMOD View Model has been employed. Predicted 24 hourly maximum Ground Level Incremental Concentrations values found at project site of PM_{10}, $PM_{2.5,}$ SOx and NOx are 0.98 $\mu g/m^3$, 0.64 $\mu g/m^3$, 0.11 $\mu g/m^3$ and 1.16 $\mu g/m^3$ respectively. This prediction is based on various mining operations proposed and site specific meteorological data in worst scenario.

- **Impact on Air Quality due to Transportation:** The maximum ground level concentration due to proposed transport is estimated to be negligible.

- **Impact on Noise Quality:** From the analytical studies, it is observed that the maximum resultant noise levels near the mine lease boundary will be about 55 dB(A). The noise levels will be further reduced and the predicted resultant noise levels at the nearest village habitation i.e. Karpewadi village will be around 50 dB(A).

- **Impact due to Ground Vibrations & Fly Rocks:** The drilling and blasting will not be carried out for mining operation. Mining will be adopted with the deployment of machines like rock breaker, Hydraulic excavators etc. Hence, no significant impact is envisaged on ground vibration. For estimating the impact on Noise *DHWANI* software is used and the prediction is presented in the report. From the modeling results, it is observed that except core zone i.e. proposed mining area, there will not be any significant increase in ambient noise levels at any of the noise monitoring locations. Therefore, no significant impact on ambient noise levels is envisaged due to the proposed mining and mineral transportation activities.

- **Impact on Water Regime:** The mine operation will be above water table as such there is no shallow aquifer exists in the core zone. Accordingly there will not be any adverse impact on ground water.

- **Impact on Flora & Fauna:** Negligible impacts on bio diversity of the area beyond what is already present due to traffic on the State Highway is essential. There is no Wildlife Sanctuary or National Park in 10 Km radius of the Mine. The transport route of the mineral also lies away from these areas.

- **Impact on Socio-Economic Aspects:** The project is likely to create positive impacts due to creation of employment opportunities both direct and indirect. Generation of employment opportunities is important as the project region is devoid of any industrial activities and agriculture is the only main source of income.

6.0 ENVIRONMENT MANGEMENT PLAN

6.1 Air Environment:

- Internal roads will be frequently sprinkled with water for which truck mounted water tankers with sprinkler arrangement have been provided.
- Ore will be covered by tarpaulins to prevent its spread during transportation.
- Regular maintenance of vehicles and machineries will be carried out in order to control emissions.
- Green belt will be developed at suitable places.
- Personal protective devices viz. ear plug, dust masks etc. will be provided to all the workers.
- Good housekeeping and proper maintenance will be practiced to control pollution.

6.2 Water Environment:

The Mining Project shall require continuous supply of water for various purposes during mining, plantation etc. apart from drinking water supply. The main source of water pollution in opencast mining project is the surface run-off due to rainfall. There may be accumulation of rain water during monsoon season and the accumulated water may contain fine silt. This shall be treated in Settling Tank of adequate dimensions. The treated water (overflow) will be used for plantation and dust suppression.

The mine water pumped from the mine pit, shall be collected in a Settling Tank at surface and after treatment part of it shall be utilized for water spraying in the mine, plantation and the excess balance (if any) shall be discharged to natural water course.

There is no nallah, river or any other water body passing through or existing within or near the vicinity of the lease area which can cause inundation. In order to restrict the surface runoff from mines to control the soil erosion and wash off from dumps following measures shall be adopted;

- Garland Drains shall be provided around the mine wherever required to arrest any soil from the mine area being carried away by the rain water;

- Loose material slopes shall be covered by plantation by making contour trenches at 2 m interval to check soil erosion both due to wind and rain;
- Retaining walls (concrete or local stone) shall be provided, around the dump or wherever required to support the benches or any loose material as well as to arrest sliding of loose debris.

6.3 Noise & Vibration

- Noise shall be best abated at source by choosing proper machinery/equipment and by providing noise insulating enclosures or padding where practicable.
- Proper maintenance of vehicles will be done to keep the noise level within limits.
- At the boundary of mining lease green belt by plantation of local trees species will be developed which will act as acoustic barrier. Planting of bushy trees of rich canopy in and around the mine area will be carried out to intercept noise transmission. A 7.5 m wide belt of trees of different heights will be useful to act as noise attenuator in the mining areas.

6.4 Waste Generation and Management:

39993 m^3 OB will be generated during the mine plan period. Mineral rejects 435000 m^3 in the form on Aluminous Laterite mineral rejects will be generated during mining in the mining plan period. The mineral rejects may be saleable depending upon market demand.

6.5 Top Soil Preservation:

2500 m^3 Top soil will be generated during the mine plan period. The quantity available, will be temporarily stacked within Safety Zone and will further be used for plantation.

6.6 Plantation:

Plantation will be carried out in the non-mineralized area on regular basis. It is proposed to select the local tree species having 3 tier arrangements for plantation all along the mining lease in order to control dispersion of fugitive dust from the mining lease are. Around 11400 trees will be planted till the end of life of mine at different locations i.e. safety zone, around the quarry edge, along the roads, office, workshop etc. At the conceptual stage, out of the total mining lease area (14.24 Ha), the total area under plantation would be 5.6769 Ha over a period of 5 years of Mine Life.

The mitigation measures suggested above shall be implemented so as to mitigate/minimize the impact on environment due to operations of proposed mining activities. In order to facilitate easy implementation, mitigation measures are phased as per the priority implementation. A separate budget allocation is made for the environmental protection measures. The monitoring of the pollution to know the effectiveness of the applied control measures will be carried out at regular interval. A budgetary provision of **95.0 lakhs** as capital expenditure and Rs **42.50 lakhs** as annual recurring expenditure is made in the management.

6.7 Land Acquisition and Compensation:

The Mining Lease Area of 14.24 Ha is Forest land. The area does not have any habitation. Thus, neither there will be any Land Oust nor any R & R of the Project Affected Persons shall be involved in the Bauxite Mine Project.

6.8 Employment Potential:

About 35 persons (skilled & unskilled) will be required for this mine. It is proposed to have a Mines Manager to supervise. He will be a qualified and experienced person who will be responsible for dealing with environmental issues also. Preference will be gives to local people meeting the eligibility criteria required for the job under consideration.

6.9 Corporate Social Responsibility (CSR)

M/s Shree Bhairavnath Earth Movers to undertake a number of activities under the Corporate Social Responsibility Initiative during the operation of Ghungur Bauxite Block-I. The capital CSR budget has been worked out as per the expressed felt needs of villagers during Rapid Rural Appraisal. The proposed total budget is to the extent the Capital Budget of Rs. 22.50 Lakhs and recurring budget of Rs. 7.5 Lakhs has been earmarked for various CSR activities for the first five years.

6.10 Corporate Environment Responsibility (CER)

In addition to the CSR, company proposes to undertake a number of activities as one time measure under the Corporate Environment Responsibility Initiative during the operation of mining project. A budgetary provision @2% of the Capital Cost, of Rs. 4.39 lakhs is proposed to be allocated and utilized for the implementation of issues raised during the Public Hearing.

7.0 PROJECT BENEFITS:

The primary benefits to the Government (State as well as Central) from any mining project are generation of additional revenues in terms of receipt of royalties and other statutory levies against the bauxite mined. Similarly, employment opportunities in the Project Area will be another benefit at local level.

The direct requirement of manpower for Ghungur Bauxite Block-I has been assessed at 35 along with further generation of indirect manpower. The Project shall offer creation of Secondary & Tertiary Business Opportunities for the local people in the form of Service Industry resulting in development of ancillary & allied services like Security, Canteen & Mess, Transport, Civil Repair & Maintenance, HEMM Repair and Maintenance etc.

APPEAL

In compliance with the environmental procedure the environmental clearance application is made. Necessary scientific studies have been undertaken as per the guidelines set by the Ministry of Environment, Forests & Climate Change (MoEF&CC). The suggestions/ recommendations of all the experts, competent authorities, and government officials are being sought for the impacts of the proposed project. Views and guidance of the local residents, community based organizations, social organizations are extremely important in order to devise a full proof Environment Management Plan for the proposed mining project and also mitigate the damages caused due to the project. Allocation of necessary funds, manpower and machinery will be made to for the protection and conservation of all the components of environment. It is ensured that all mandatory clearances will be sought from respective competent authorities before operating the proposed mining of Ghungur Bauxite Block-I. M/S Shree Bhairavnath Earth Movers & Company is committed to implement the suggestions for the improvement of the environment and assure that every attempt will be made for the conservation and protection of the natural resources to the maximum extent.