

# EXECUTIVE SUMMARY OF DRAFT EIA REPORT

FOR

*Environmental Clearance for Proposed Achholi Farshi Pathar Mine Project*

| Address of Applied land  | Land Khasra  | Area of applied lease (Ha) | Capacity  | Total Cluster Area |
|--|--|----------------------------|-----------|--------------------|
| Village – Achholi<br>Tehsil/ District-<br>Mahasamund ,<br>Chhattisgarh | 1886, 1888/2,<br>1895/1, 1889/2,<br>1890, 1896, 1889/1 | 3.00                       | 48,276.72 | 33.06 Ha           |

## *Applicant Name & Address*

| Name of Applicant | Address  |
|-------------------|--|
| Archit Soni       | House No.54/12K, Mukut Nagar<br>Village & Tehsil - Raipur (C.G.)<br>District - Raipur (C.G.)<br>Pin no. - 492001 |

## *Terms of Reference*

| Name of Applicant | Number and date of Terms of reference   |
|-------------------|---|
| Archit Soni       | Vide letter no.<br>3286 /S.E.A.C.C.G. /Mine/ 2640 Nawa Raipur<br>Atal Nagar, Dated 19/03/2024 |

## **ENVIRONMENTAL CONSULTANT**



Environmental Consultancy & Laboratory  
(Lab. Gazetted by MoEF-Govt. of India)

**M/s. ULTRA-TECH**

**ENVIRONMENTAL LABORATORY AND CONSULTANCY**

**NABET Accredited EIA Consulting Organization**

**NABET Accreditation Number: NABET/EIA/2023/RA019-Rev 01**

**Valid Upto - Oct 18,2024**

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## EXECUTIVE SUMMARY

### 1.0 Introduction

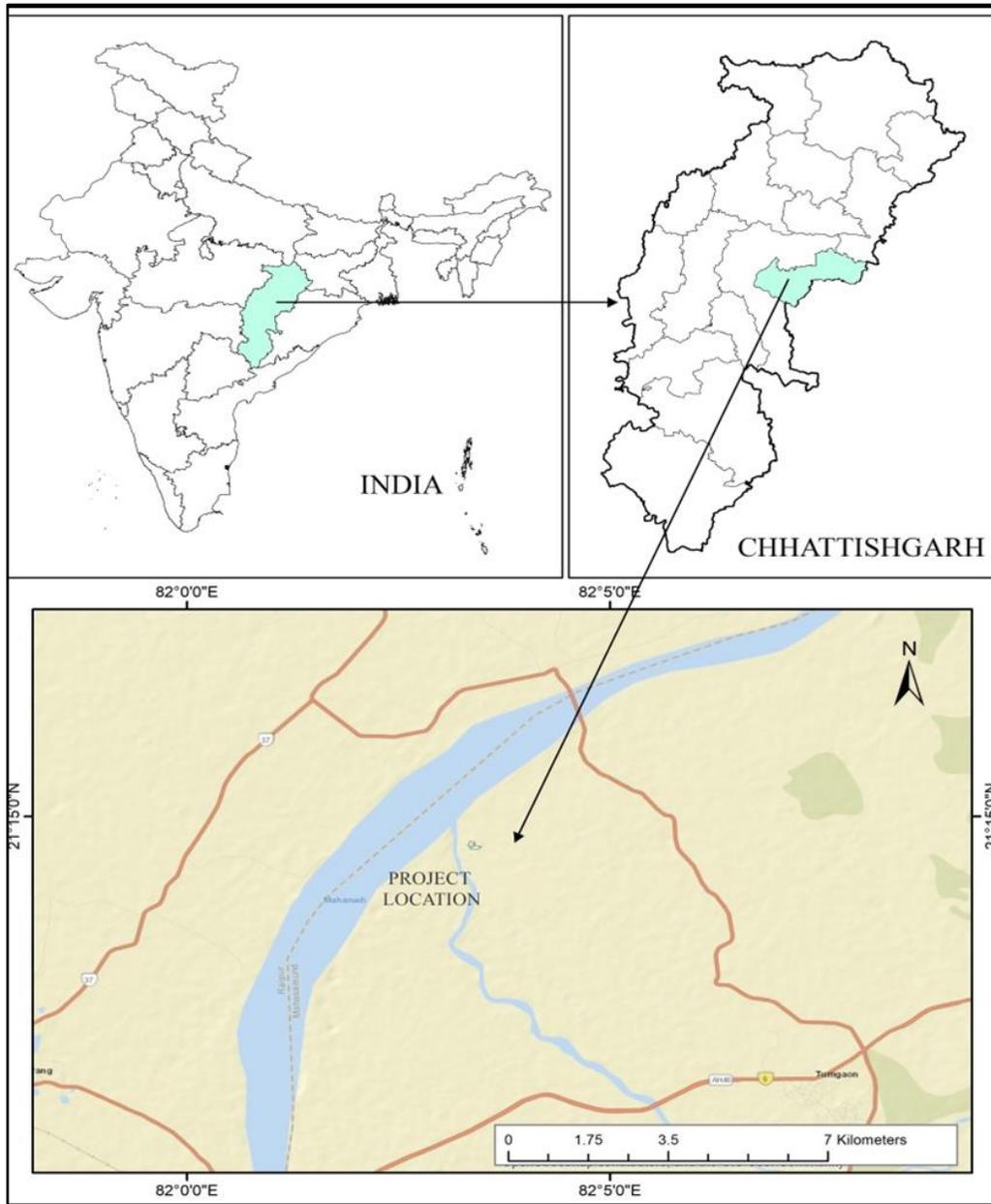
The proposed project is a cluster project of Mining of Farshi Pathar Mine (Total lease area in cluster including applied mine – 33.06 Ha of Mineral Farshi Pathar) at Village –Achholi, Tehsil – Mahasamund, District: Mahasamund, State: Chattishgarh. Details of the entire lease are discussed in the further chapters. The lease holder in the cluster is Archit Soni, having lease area of 3.00 Ha. TOR issued in favour of project proponent whose details is as follow-

**Archit Soni** – TOR vide letter no.- 3286/S.E.A.C.C.G./Mine/2640 Nawa Raipur Atal nagar, dated 19/03/2024

This mining project comes under Category ‘B1’ (Cluster situation) Project or activity 1(a) as per EIA Notifications 2006, and its subsequent amendments and will be appraised at SEAC, Chattisgarh. The lease is falling in the cluster as per 15th January 2016 EIA Notification of MoEF&CC and NGT order dated 13th September 2018.

### Project Location –

The mining lease area of Achholi Farshi mine covers an area of 3 Ha under khasra no 1886,1888/2, 1895/1, 1889/2, 1896, and 1889/1 of Archit Soni featured in the Survey of Indian Toposheet No. 64 K/3, 64K/4, 64K/15, 64K/16



**Figure 1: Location map of the Project Site**

*Executive Summary of Draft EIA Report of Achholi Farshi Patthar Mine of Archit Soni at Village Achholi, Tehsil- Mahasamund, District-Mahasamund, State- Chattishgarh.*

**Table E.1: Environmental Setting around Project Site**

|   |  |                 |                  |
|---|--|-----------------|------------------|
| <b>Name of the Project</b>                    | Achholi Farshi Pathar Mine   |                 |                  |
| <b>Location of the Project</b>                | Village – Achholi , Tehsil- Mahasamund , District – Mahasamund   |                 |                  |
| <b>Geographical Coordinates:</b>              | <b>Boundary Points</b>   | <b>Latitude</b> | <b>Longitude</b> |
|   | BL1  | 21°13'29.85"N   | 82° 3'46.19"E    |
|   | BL2  | 21°13'31.49"N   | 82° 3'49.22"E    |
|   | BL3  | 21°13'30.87"N   | 82° 3'49.46"E    |
|   | BL4  | 21°13'31.25"N   | 82° 3'50.95"E    |
|   | BL5  | 21°13'31.90"N   | 82° 3'50.82"E    |
|   | BL6  | 21°13'31.86"N   | 82° 3'51.51"E    |
|   | BL7  | 21°13'32.15"N   | 82° 3'51.89"E    |
|   | BL8  | 21°13'33.03"N   | 82° 3'51.52"E    |
|   | BL9  | 21°13'32.55"N   | 82° 3'51.20"E    |
|   | BL10   | 21°13'32.68"N   | 82° 3'50.16"E    |
|   | BL11   | 21°13'33.82"N   | 82° 3'50.07"E    |
|   | BL12   | 21°13'34.07"N   | 82° 3'51.32"E    |
|   | BL13   | 21°13'37.37"N   | 82° 3'50.40"E    |
|   | BL14   | 21°13'38.08"N   | 82° 3'50.34"E    |
|   | BL15   | 21°13'38.02"N   | 82° 3'49.75"E    |
|   | BL16   | 21°13'38.25"N   | 82° 3'49.51"E    |
|   | BL17   | 21°13'38.20"N   | 82° 3'46.80"E    |
|   | BL18   | 21°13'35.28"N   | 82° 3'46.40"E    |
|   | BL19   | 21°13'35.11"N   | 82° 3'46.82"E    |
|   | BL20   | 21°13'33.43"N   | 82° 3'46.01"E    |
|   | BL21   | 21°13'33.36"N   | 82° 3'45.73"E    |
| <b>Size of the Project</b>                    | 3.00 Ha  |                 |                  |
| <b>Nearest Highway</b>                        | NH- 53 at 3.90 km towards south-east (Mumbai-Kolkata hwy road).  |                 |                  |
| <b>Nearest railway station</b>                | Belsonda - 8.30 km toward south  |                 |                  |
| <b>Nearest Airport</b>                        | Raipur – 34 km toward west   |                 |                  |
| <b>Nearest town/City</b>                      | Arang – 10 km toward south - west  |                 |                  |
| <b>Nearest water body</b>                     | Village Pond – 50 m toward east  |                 |                  |
| <b>Major water bodies within 10 km radius</b> | Mahanadi River - 2.40 km toward North-west<br>Seasonal nalla – 760 m towards west<br>Canal – 70m toward south-west |                 |                  |

*Executive Summary of Draft EIA Report of Achholi Farshi Patthar Mine of Archit Soni at Village Achholi, Tehsil- Mahasamund, District-Mahasamund, State- Chattishgarh.*

|   |  |
|---|--|
| <b>Densely populated or built-up area</b>   | Arang at 10.00 km toward south - west  |
| <b>Archaeologically important places</b>  | None within 10 km radius   |
| <b>Protected areas as per Wildlife Protection Act (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)</b> | None within 10 km radius   |
| <b>Reserved / Protected Forests</b>   | <ol style="list-style-type: none"> <li>1. Kukradih R.F – 6.00 Km</li> <li>2. Sirpur R.F – 8.70 Km</li> <li>3. Tungaom R.F – 7.70 Km</li> </ol> |
| <b>Defense Installations</b>  | None within 10 km radius   |
| <b>Seismicity</b>   | Since project site comes under Seismic zone II, which is least active zone for earthquakes as per IS: 1893 (Part 1: 2002).                     |
| <b>Wildlife Sanctuary</b>   | None within 10 km radius   |
| <b>National Park</b>  | None within 10 km radius   |
| <b>Biosphere reserves</b>   | None within 10 km radius   |
| <b>Important migration routes of birds</b>  | None within 10 km radius   |
| <b>Ramsar sites (Wetlands of International Importance)</b>  | None within 10 km radius   |
| <b>Unique or threatened ecosystems</b>  | None within 10 km radius   |
| <b>Important topographical features, including ridges, river valleys, shorelines, and riparian areas</b>  | None within 10 km radius   |
| <b>Mangrooves</b>   | None within 10 km radius   |
| <b>Physical Sensitive Receptors</b>   | None within 10 km radius   |
| <b>Notified Ground Water Zone by CGWA</b>   | None within 10 km radius   |
| <b>Critically Environmental polluted Area</b>   | None within 10 km radius   |
| <b>Pollution Sources</b>  | None within 10 km radius   |

## 2.0 Project Description

The proposed project of Achholi Farshi Pathar of 3 Ha is situated at Village-Achholi, Tehsil Mahasamund, and District: Mahasamund, State: Chattishgarh. The life span of proposed mine block is 30 years. The proposed method of mining is open cast semi mechanized mining. Table E.2: Salient Features of the Proposed Mining Project.

**Table E-2: Salient Features of the Proposed Mining Project**

| INFORMATION  | DETAILS  |
|--|--|
| <b>Name of Lease holders</b>   | Archit Soni  |
| <b>Address and Contact details of Lease Holders</b>                          | S/o. Shri Amit Soni<br>House no. -54/12k, Mukut Nagar, Raipur<br>Tehsil/District- Raipur |
| <b>Name of the project</b>   | Achholi Farshi Patthar Mine  |
| <b>Village</b>   | Achholi  |
| <b>Tahsil</b>  | Mahasamund   |
| <b>District</b>  | Mahasamund   |
| <b>State</b>   | Chhattisgarh   |
| <b>Toposheet No</b>  | 64K/4  |
| <b>Name of the Mineral to be mined</b>                                       | Farshi Patthar   |
| <b>Type of land</b>  | Private Land. There is no Forest land. No human settlement.                              |
| <b>Status of Operation (New Project or Existing Project operating since)</b> | New Project  |
| <b>Mine Area</b>   | 3.00 Hect  |
| <b>Ultimate depth of mining</b>  | 18.0 meter   |
| <b>Production Capacity</b>   | 20,115.30 Cum/year or 48,276.72 TPY  |
| <b>Life of Mine</b>  | As per Lease period -30 years  |
| <b>Quantity of topsoil and Overburden estimated to be removed</b>            | Top Soil -4,700 Cum<br>OB - 65,800 Cum   |
| <b>Depth of Ground Water Table</b>   | Approx. 30 meters of below from the normal surface level                                 |
| <b>Method of Mining</b>  | Opencast manual Mining   |
| <b>No. of working days</b>   | 240 Days   |
| <b>Seismic Zone</b>  | Seismic Zone II  |

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## 2.1 Water Requirement-

The total water requirement shall be 8.00 KLD for Achholi Farshi Pathar Mine respectively for domestic, green belt and sprinkling purpose, which will be sourced from Water Tankers from nearby village. Detail of water requirement is given below:

**Table E-3.1: Water Requirement Details for Archit Soni**

| Sr. No.         | Usage                                      | Water Requirement   |                |
|-----------------|--|---|----------------|
| 1.              | Greenbelt Development@ 2.5 L/tree          | 1290Trees X 2.5Lit/day<br>=3225Lit/day  | 3.50 KLD       |
| 2.              | Stone Cutting/Wet Cutting                  | Same water is used through recycling with in mine pit   | 2.00 KLD       |
| 3.              | Dust Suppression @ 0.5 L/Sqm (twice a day) | Haul road Area = (500m Length x 4 m width = 2000 sqm.) x 0.5 li/sqm<br>=1000 lit /day x 2 time = 2000 lit/day | 2.00 KLD       |
| 4.              | Domestic Purpose @30 lpd/worker            | 16 workers x 30 lit per day =<br>480Lit/Day or say 0.50 Lit/Day   | 0.50KLD        |
| <b>Total ::</b> |  |   | <b>8.00KLD</b> |

## 2.2 Power Requirement

No power is required for mining purpose other than for labor, admin building and for Stone Cutting Machine. State electricity board will supply the electricity. Electric power is available in the lease area.

## 2.3 Manpower Requirement

The mining project will generate direct & indirect employment. Local people will get direct employment, and some persons will also be affected indirectly and employed with allied and related industries, such as transportation, maintenance, etc. Following staff & workers are proposed to be employed: -

**Table E-4: Manpower Details Achholi Farshi Pathar Mine**

| S.No. | Category    | No. of persons |
|-------|-------------|----------------|
| 1     | Mining Mate | 1              |

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|   |              |           |
|---|--------------|-----------|
| 2 | Supervisor   | 1         |
| 3 | Skilled      | 14        |
|   | <b>Total</b> | <b>16</b> |

### 3.0 Description of Environment

The area around the proposed mining site has been surveyed for physical features and existing environmental scenario. The field survey and baseline monitoring has been done from the period of **26<sup>th</sup> October 2023- 26<sup>th</sup> January 2024** (Post Monsoon Season).

The observations for Post Monsoon season **26<sup>th</sup> October - 26<sup>th</sup> January** are summarized below:

### 3.1 Meteorology

The secondary meteorological data of the study period collected from [www.imdpune.gov.in/](http://www.imdpune.gov.in/). The month wise meteorological data is given in Table E-5.

**Table E-5: Meteorological Data of the study area (IMD – Raipur)**

| Period   | Wind Speed (m/s) |      |      | Temp (°C) |      |      | Relative Humidity (%) |      |       | Rainfall (mm) |     |      | Solar Radiation |     |        |
|----------|------------------|------|------|-----------|------|------|-----------------------|------|-------|---------------|-----|------|-----------------|-----|--------|
|          | Max              | Min  | Avg  | Max       | Min  | Avg  | Max                   | Min  | Avg   | Max           | Min | Avg  | Max             | Min | Avg    |
| Oct - 23 | 3.66             | 0.34 | 1.83 | 26.17     | 15.1 | 20.5 | 96                    | 53.2 | 75.68 | 0             | 0   | 0    | 856.7           | 0   | 227.24 |
| Nov - 23 | 5.11             | 0.23 | 2.24 | 28.40     | 12.2 | 20.2 | 100                   | 51.9 | 82.81 | 0.71          | 0   | 0.01 | 769.85          | 0   | 181.93 |
| Dec - 23 | 7.43             | 0.38 | 2.41 | 26.23     | 7.38 | 16.8 | 100                   | 44.6 | 80.95 | 1.92          | 0   | 0.04 | 725.95          | 0   | 169.49 |
| Jan - 24 | 3.83             | 0.13 | 2.33 | 26.35     | 8.08 | 17.6 | 100                   | 39.2 | 78.23 | 0.02          | 0   | 0.01 | 762.23          | 0   | 154.18 |

Source: Weather Summary for 26<sup>th</sup> October 2023 - 26<sup>th</sup> January 2024(<https://www.nasa.gov.in/>)

### 3.2 Air Environment

The ambient air quality is carried out at 10 locations in and around the project site and studies are carried out as per CPCB standards. It is observed that, all the values are within the prescribed limits as per National Ambient Air Quality Standards (NAAQS), 2009.

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The results are compared with the standards prescribed by Central Pollution Control Board (CPCB). The overall ambient air quality around the proposed mine lease is within the limits of ambient air quality standards prescribed by CPCB.

The observations for Winter season - (26th Oct 2023- 26th January 2024) are given in table-

### 3.3 Noise Environment

Noise levels were monitored in ten locations including project within the study area. The noise levels ranged between 58.1 to 50.1 dB (A) during day time and noise levels ranged between 47.1 to 42.2 dB (A) during night time. Over all the monitored noise levels are found to be within the stipulated standards set by CPCB.

### 3.4 Water Environment

In order to establish the baseline water quality, 5 ground water and 4 surface water samples were collected and analysed in the study area. The quality of surface water samples was compared with surface water specification IS 2296:1982 and the surface water quality comes under Class D (Propagation of wildlife and fisheries). The ground water samples were compared with drinking water specification IS 10500:2012 standards.

### 3.5 Soil Quality

A total of 10 samples in and around the project site are collected and analysed. It has been observed that the pH of the soil quality ranged from 6.8 (S1) to 7.9 (S4) indicating that the soil is slightly alkaline in nature.

**Table E- 6: ENVIRONMENTAL BASELINE STUDY**

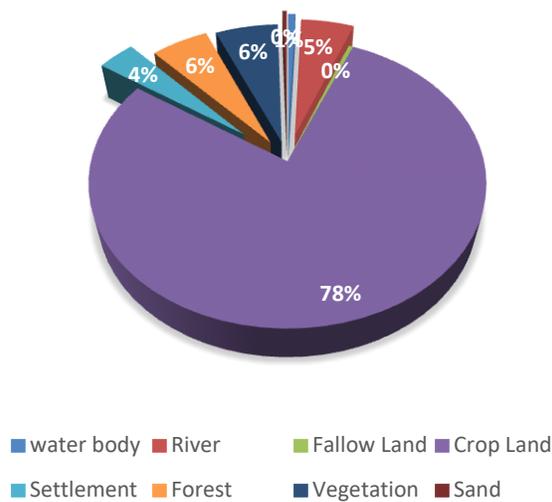
| Particular                                       | Number of Locations               | Description   |
|--|-----------------------------------|---|
| <b>Background Ambient Air Quality Monitoring</b> | Sampling was done at 10 Locations | PM <sub>10</sub> :-47 to 74 µg/m <sup>3</sup><br>PM <sub>2.5</sub> :-16 to 39 µg/ m <sup>3</sup><br>SO <sub>2</sub> :- 5 ug/m <sup>3</sup> to 13µg/ m <sup>3</sup><br>NO <sub>x</sub> :- 8 to 19 µg/ m <sup>3</sup><br>CO:-0.1 to 1.3 mg/ m <sup>3</sup><br>SiO <sub>2</sub> -0.01 to 0.05 µg/ m <sup>3</sup> |
| <b>Noise Level Monitoring</b>                    | Monitored at 10 Locations         | Noise Level During Day Time :- 50.1 to 58.1 dB (A)<br>Noise Level During Night Time:- 42.2 to 47.1 dB (A)   |

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|                       |   |  |
|-----------------------|---|--|
| <b>Water Sampling</b> | Ground water sampling was done at - 5 Locations | pH :- 7.4 to 7.9 ;<br>TDS :- 396 to 622 mg/l ;<br>Total Hardness :- 244 to 368 mg/l<br>SO <sub>4</sub> :-56 mg/l to 84 mg/l;<br>Chloride :- 59 mg/l to 105 mg/l;<br>Zn & Fe: - Below detectable limit.                                     |
|                       | Sampling:- 4 at Surface water                   | pH :- 7.2 to 7.5 ;<br>TDS :- 200 mg/l to 270 mg/l;<br>Dissolve oxygen: - 5.6 to 6.00 mg/l.<br>Chloride :- 48 mg/l to 65 mg/l;<br>Calcium :- 25 mg/l to 30 mg/l;<br>Magnesium :- 12 mg/l to 18 mg/l;<br>Total Hardness :- 112 to 146 mg/l ; |
| <b>Soil Sampling</b>  | Sampling was done at 10 Locations               | pH :- 6.8 to 7.9;<br>Nitrogen:- 173to 193 kg/ha.<br>Phosphorus:- 55 to 86 kg/ha<br>Potassium :- 325 to 439 kg/ha<br>Electric Conductivity:- 269 to 467 ms/cm   |

### Land Use/Land Cover of the Study Area

The project's location is near Achholi, a village in Mahasamund Tehsil, Mahasamund District, Chhattisgarh State, India. It is located 9 kilometres north of the district headquarters in Mahasamund. Chhattisgarhi is the local language in Kanpa. The total geographical area of village is 793.25 hectares. Achholi has a total population of 2,228 peoples, out of which male population is 1,102 while female population is 1,126. Literacy rate of achholi village is 61.36% out of which 72.23% males and 50.71% females are literate. There are about 441 houses in achholi village. Pincode of achholi village locality is 493445.



**Figure 2: LULC Classification (10 km radius Proposed Project Area) of the project site**

**3.6 Biological Environment**

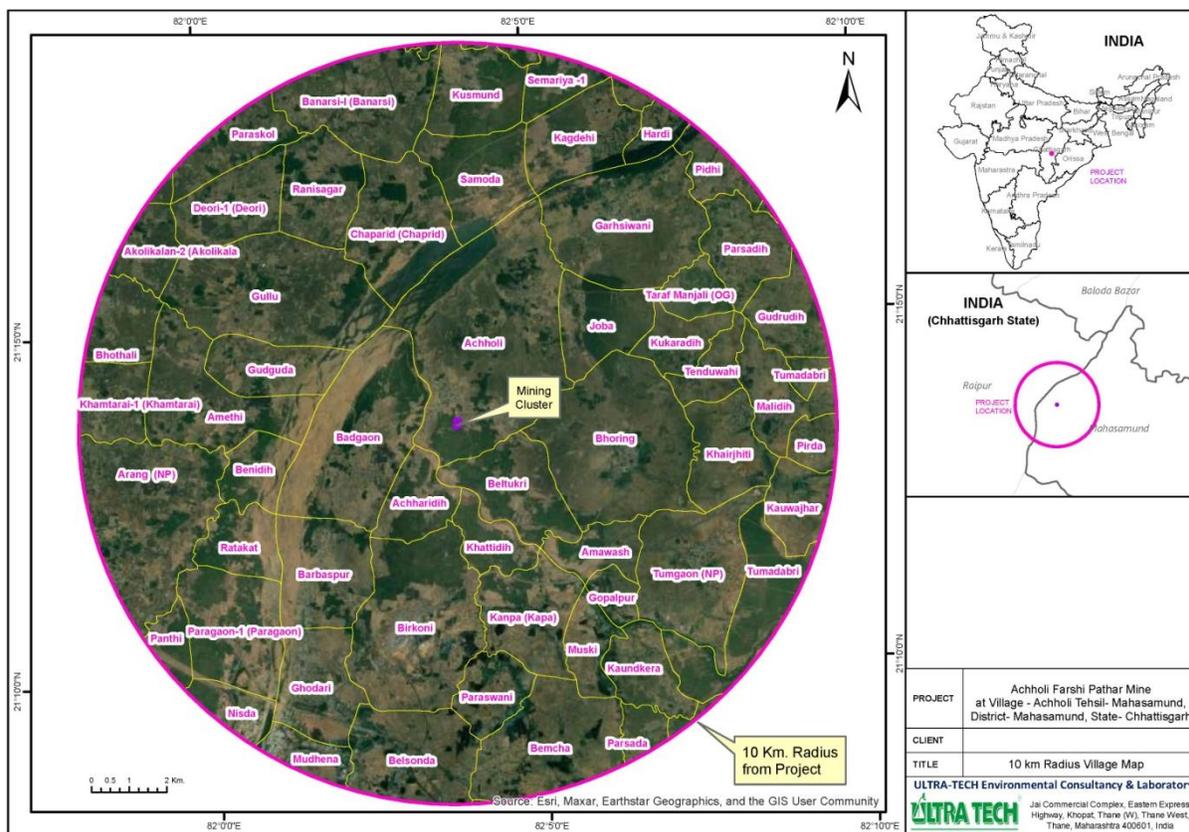
The ecological study of the area has been conducted within 10 km radius of the project site in order to understand the existing status of flora and fauna to generate baseline information. Following RF are being observed within 10 km surrounding from the project site.

| SN | Name of forest block | Type of Forest  | Distance (km) |
|----|----------------------|-----------------|---------------|
| 1  | Near Kukradih        | Reserved forest | 6.00          |
| 2  | Near Sirpur          | Reserved forest | 8.70          |
| 3  | Near Tumgaon         | Reserved forest | 7.70          |

**3.7 Socio-economic Environment**

The setting up of any kind project would undoubtedly include significant impact on socio-economic and cultural life of the people in the project area. Here, an attempt is made to visualize and discuss such tentative impacts likely to be induced by the project. The likely impacts due to project activity are described below:

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**Figure 3: Population Concentration Map of the study area**

### 4.0 Anticipated Environment Impacts and Environment Management Plan

#### *Land/Soil Environment Impact Mitigation*

The mitigation measure of the land environment includes:

- Before the mining activity the top soil will be scrapped and stored in the lease area and will be utilized for plantation purpose. Balance top soil if any preserved separately will be used to spread over partially reclaimed land.
- The farshi pathar excavated from the lease area will be completely sellable resulting no dump within the lease area
- At the end of conceptual period the excavated quarry will converted into water reservoir to supply water for local use like irrigation and pisciculture.

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- Due to manual mining operation emission from the farshi pathar mines are very less, there will be no impact on the surrounding soil quality and cropping pattern of the area.
- The propose project falls under the seismic zone –II (Low Hazard Risk Zone). Since this project will not have physical infrastructure to be constructed, no impact of seismicity is envisaged in this project. Further, this project will not change/alter the seismic behavior of the area.

### ***Air Impact Mitigation***

The mitigation measures undertaken in the mine for control of air pollution are:

- Checking of vehicles and machinery to ensure compliance to Indian Emission Standards Transportation vehicles and machinery to be properly and timely maintained and serviced regularly to control the emission of air pollutants in order to maintain the emissions of NO<sub>x</sub> and SO<sub>x</sub> within the limits established by CPCB.
- 2 KLD water required towards dust suppression purpose for which 2 no. of water tanker with 2000 liter capacity will be hired and used for water sprinkling twice in a day in haul roads, dumping site, loading and unloading site of each lease within the cluster and this will be regularly monitored by the cluster management. Water sprinkling on transport road side, stock yard (if any) etc. will be done by tractor mounted water sprinkler.
- Regular ompaction and grading of haul roads will be done to clear the accumulaion of loose material
- All the mines workers will beprovided with the dust masks.
- Trees can act as efficient biological filters. As this is a small lease, the area available for plantation is very less. However a well-planned plantation programme has been proposed for the mining area to arrest the dust pollution within the lease boundary. There is the proposal for continuous plantation along the cluster boundary and both side of the road connecting the cluster.
- Vehicles with valid PUC shall be used for transporting the minerals to avoid the exhaust emission.
- A greenbelt development plan is prepared with local species. The greenbelt on the periphery will reduce the dust levelsits
- Sharp drill bits will be used for drilling and regrinding willbbe done periodically to reduce generation of dust.
- Regular monitoring of the air quality as per the monitoring plan detailed in Chapter 6 of this EIA report shall be adopted during the operation phase, to ensure that, the air quality is within the desired limits prescribed by CPCB.

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### ***Noise Impact Mitigation***

- No noise polluting work shall be carried out in the night hours
- Provision of PPE's for the workers
- Vehicles to be serviced regularly and maintained properly to avoid any unwanted generation of noise or vibration from them
- Green belt plantation and garden trees will help in reducing the noise, traffic related pollution and heat island effects.
- Proper lubrication, muffling and modernization of equipment shall be used to reduce the noise during operation phase.
- Regular monitoring of the noise levels as per the monitoring plan detailed in Chapter 6 of this EIA report, shall be adopted during the operation phase, to ensure that, the noise levels are within the limits prescribed by CPCB.

### ***Water Impact Mitigation***

- Provision of temporary toilets for laborers
- Domestic waste water will be treated into septic tank followed by soak pit outside of the proposed cluster project with a safe distance and no wastewater will be allowed to be get discharged into the water body
- All stacking and loading areas should be provided with proper garland drains
- Check dams should be provided to prevent solids from wash off.
- Construction of garland drains around freshly excavated and dumped areas so that flow of water with loose material is prevented.
- The mine water should be passed through specially constructed catch pits to arrest any loose material being carried away with water.
- Any areas with loose debris within the leasehold should be planted.
- Garland drains should be constructed surrounding the waste dumps and should be connected to the surface water reservoir to avoid the run-off mixing directly to natural water channels before settling.
- Ground water table will not be intersected during the mining activity

### ***Biological Impact Mitigation***

The impact of the mining activity on the biological environment is as follows:

- The mining core zone does not include any forest land. There will be no cutting of trees during the mining activity so no deforestation activity will be under taken.
- The existing vegetation within the core area includes very less vegetation which are sparsely scattered as it is a mining project of Farshi Pathar activities will be confined to core zone only. The project area is surrounded by agricultural land. They will not be disturbed due to the mining activity.so; the impact on the vegetation is very less.
- The transportation of farshi Pathar stone and waste may create dust pollution which may create loss of biodiversity of the area.
- Dust in atmosphere, contributed by mining and associated activities, when deposited on theleaves of the plants in the surrounding areas may retard their growth.

The cluster area and its buffer zone are devoid of any Eco sensitive area. So the impact on the biodiversity and wild life is minimal.

### ***Socio-Economic Environment Impact Mitigation***

In order to mitigate the adverse impacts likely to arise in the surrounding area due to proposed project activity, it is necessary to formulate an effective mitigation plan. The suggestions are as follows:

Before Commencing and During Initial Phase:

- Communication with the local community should be institutionalized and done on a regular basis. The forum could provide opportunities to discuss local critical issues and prepare programmers of mutual benefits.
- Information regarding the proposed dragging plan should be communicated to the local community in the form of display Poster, booklets and audio-visuals.

Mining Phase:

- Project proponent should take appropriate steps to keep environment clean and healthy during construction phase.

- Provision of adequate drinking water, toilet and bathing facilities should be made available on project site also in labour camp site.
- Water shall be sprinkle/spread over the truck and road to suppress dust during transportation of mining material to control air pollution and thereby avoid adverse health impact.
- A barrier located in the direction of the wind, with a height of approximately three times the height of the storage pile for reduce PM10 emissions.
- While transportation of dragging material, truck, tractors should be covered.
- Proper Training and awareness programme should be carried out so that the workers understand the importance of wearing the personal protective and safety equipment's.

### **5.0 Environmental Monitoring Program**

Environmental monitoring shall be carried out at the locations to assess the environmental health in the post period. A post study monitoring programme is important as it provides useful information on the following aspects.

- It helps to verify the predictions on environmental impacts presented in this study.
- It helps to indicate warnings of the development of any alarming environmental situations, and thus, provides opportunities for adopting appropriate control measures in advance.

Detailed EMP plan during the operation phase is given chapter 6 of EIA report.

### **6.0 Risk Assessment**

The hazards and its risk assessed during the operation phase of the proposed farshi pathar mining project are low, medium & high. The project proponents are proposed to implement all the mitigation measures to prevent the impact or consequences of the risk expected to be happened in both the project sites. The level of impact after implementing the mitigation measures will be low/medium in all the hazards identified.

### **7.0 Emergency Response and Disaster Management Plan**

Impact of disaster can be significantly reduced through attempts at preparedness, mitigation, and post-event rehabilitation work. Based on hazard identification in the proposed project, an emergency plan has been prepared and the same plan will be implemented by the project implementing agency with the

coordination of District Authorities to minimize the damage. The risk assessment and disaster management plan is detailed in Chapter 7 of the EIA report.

## 8.0 Project Benefits

Mining is back bone of infra-structure development of country. Proposed project has following benefits as given below:

- Employment for local people
- Revenue for the State Government in form of excise duties, GST, taxes, levies etc.
- Generate business opportunity for the people
- Need based funds will be used for welfare of people in villages
- EMP funds will improve environmental quality.
- The operation of the farshi pathar mining would help to improve socio-economic condition of people in villages through separate fund allocated for Need Based Activity.

## 9.0 Budget for Social Development

The total estimated cost of the project is 34.31 lacs . Rs 95000/- lac will be allocated for Need based activity for causes of village for drinking water, sanitation, education, health.

## 10.0 Environment Management Plan (EMP)

The detailed Environment Management Plan has been prepared based on the mining activities and the impacts imparting on land/soil, air, noise, water by the activities. The EMP and the cost for the environment protection measures are detailed in Chapter 10 of EIA report.

### Expenditure Proposed for Environmental Protection Activities:

| S.No. | Particulars                        | Archit Soni        |                      |
|-------|------------------------------------|--------------------|----------------------|
|       |                                    | Capital Cost in Rs | Recurring Cost in Rs |
| 1     | <b>Air Pollution Control</b>       | -                  | 72,000               |
| 2     | <b>Green Belt Development</b>      | 4,05,184           | 2,39,650             |
| 3     | <b>Maintenance of Road</b>         | -                  | 40,000               |
| 4     | <b>Facilities for Mine workers</b> | 50,000             | 72,000               |
|       | <b>Total ::</b>                    | <b>4,55,184</b>    | <b>4,236,50</b>      |
|       | <b>Total Capital Cost in Rs</b>    | <b>4,55,184</b>    |                      |

*Executive Summary of Draft EIA Report of Achholi Farshi Patthar Mine of Archit Soni at Village Achholi, Tehsil- Mahasamund, District-Mahasamund, State- Chattishgarh.*

|                                   |                 |
|-----------------------------------|-----------------|
| <b>Total Recurring Cost in Rs</b> | <b>4,236,50</b> |
| <b>Total Cost of EMP in Rs</b>    | <b>8,79,000</b> |

## 11.0 Conclusion

As discussed, it is safe to say that the collection of minor mineral from the proposed lease area is not likely to cause any significant impact on the ecology of the area as the mineral is and waste generated is non-toxic and does not harm the surrounding environment.

Adequate measures will be taken to control the fugitive emissions to be generating during mining operation. Socio-economic condition of the surrounding villages will improve in long run due to involvement of local population and improvement of infrastructure facilities. Green belt development in the statutory boundary, approach roads, schools are proposed with the participation of local people. This proposed plantation in the area will improve the aesthetic look along with betterment of ecology and environment of the locality.

