To, Date:

.....

Chairman/Secretary
State Level Expert Appraisal Committee
Directorate of Environment, Govt. of U.P,
Dr. Bhimrao Ambedkar Paryavaran Parisar,
Vineet Khand-1, Gomti nagar, Lucknow

**Sub:** Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh.

**Project Proponent**: Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP.

Dear Sir,

We are herewith submitting Form-1, Pre Feasibility Report (PFR), EMP and Approved Mine Plan along with their soft copy Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh

We please request you to kindly consider our project.

Thanking you.

Yours truly

Sushil Parecha S/o Late. Goverdharn Das Parecha,
R/o A-27 Ramnath City, District- Jhansi, UP.

# Environmental Clearance
for
# Building Stone (Gitti-Pathhar, Khandas, Boulder) Mining at

**Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No. /Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh**

***Plan Period- 5 Year***

***Category –$B_2$, Item 1[a (i)]***
***Mining of minerals***

**Submitted to:**
***State Level Expert Appraisal Committee (SEAC), Uttar Pradesh***

**Applicant/Lessee:**
**Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP.**


**Environment Consultant:**
***Paramarsh***
***(Servicing Environment and Development)***
*QCI (NABET) Accredited and ISO Certified Organization*
*B1/67, Sectors-G, Jankipuram, Lucknow- 226021, Uttar Pradesh*
***Email: paramarsh.env@hotmail.com,***
***Ph: 0522 -4307467***

## FORM 1

### i. Basic Information

| Sl. | Item | Details |
|---|---|---|
| 1. | **Name of the project/s** | Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District-Jhansi, Uttar Pradesh |
| 2. | **S.No. In the schedule** | 1(a), Category- B (B2) |
| 3. | **Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled** | Proposed Production: 70,000 $m^3$ / 1,75,000 tons per annum<br>Area 2.023 ha. (5.0 Acres) |
| 4. | **New/Expansion/Modernization** | Expansion (Quantity) |
| 5. | **Existing Capacity/Area etc.** | Proposed Production: 70,000 m3 / 1,75,000 tons per annum<br>Area 2.023 ha. (5.0 Acres) |
| 6. | **Category of Project i.e. 'A' or 'B'** | Category- B (B2) (as per EIA notification SO. 141(E) 15 Jan 2016) |
| 7. | **Does it attract the general condition? If yes, please specify.** | No |
| 8. | **Does it attract the specific condition? If yes, please specify.** | No |
| 9. | **Location** | |

<table>
<tr><th>Sl.</th><th>Item</th><th>Details</th></tr>
<tr><td></td><td>Plot/Survey/Khasra No.</td><td>Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District-Jhansi, Uttar Pradesh.
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>25° 21’40.05’’ N</td><td>78° 31’ 30.98”E</td></tr>
<tr><td>B</td><td>25° 21’38.21’’ N</td><td>78° 31’ 34.50”E</td></tr>
<tr><td>C</td><td>25° 21’38.90’’ N</td><td>78° 31’ 35.69”E</td></tr>
<tr><td>D</td><td>25° 21’37.71’’ N</td><td>78° 31’ 37.25”E</td></tr>
<tr><td>E</td><td>25° 21’34.82’’ N</td><td>78° 31’ 35.17”E</td></tr>
<tr><td>F</td><td>25° 21’35.59’’ N</td><td>78° 31’ 34.10”E</td></tr>
<tr><td>G</td><td>25° 21’34.10’’ N</td><td>78° 31’ 32.93”E</td></tr>
<tr><td>H</td><td>25° 21’37.84’’ N</td><td>78° 31’ 29.49”E</td></tr>
</table></td></tr>
<tr><td></td><td>Village</td><td>Dangriyaroond</td></tr>
<tr><td></td><td>Tehsil</td><td>Jhansi</td></tr>
<tr><td></td><td>District</td><td>Jhansi</td></tr>
<tr><td></td><td>State</td><td>Uttar Pradesh</td></tr>
<tr><td>10.</td><td>Nearest railway station/airport along with distance in kms.</td><td>Railway Station:<br>• Bijauli Railway station – 2.0* km (NW)<br>• Jhansi Railway station- 10.0* km (N)<br>Airport: Jhansi Airport – 14.0* km (N)</td></tr>
<tr><td>11.</td><td>Nearest town, city, district headquarters along with distance in kms.</td><td>Nearest City:<br>• Jhansi- 10.0* km (N)<br>District headquarters:<br>• Jhansi10.0* km (N)</td></tr>
<tr><td>12.</td><td>Village Panchayats, Zilla Parishad, Muncipal corporation, Local body (complete postal</td><td>Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh</td></tr>
</table>

| Sl. | Item | Details |
|---|---|---|
| | **addresses with telephone nos. to be given)** | |
| **13.** | **Name of the applicant** | Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP |
| **14.** | **Registered address** | Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh |
| **15.** | **Address for correspondence** | |
| | **Name** | Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, |
| | **Designation (Owner/Partner/CEO)** | Owner |
| | **Address** | Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh |
| | **Pin Code** | 284303 |
| | **E-mail** | Vikram251278@gmail.com |
| | **Telephone No.** | 9335881715 |
| | **Fax no.** | - |
| **16.** | **Details of Alternative sites examined, if any. Location of these sites should be shown on a Toposheet.** | No site alternatives have been proposed. |
| **17.** | **Interlinked projects** | None |
| **18.** | **Whether separate application of interlinked project has been submitted?** | NA |
| **19.** | **If yes, date of submission** | NA |
| **20.** | **If no, reason** | NA |
| **21.** | **Whether the proposal involves approval/clearance under: If yes, details of the same and their status to be given.**<br>**(a) The forest (conservation) Act, 1980?**<br>**(b) The wildlife (protection) Act, 1972?**<br>**(c) The C.R.Z. Notification, 1991?** | (a) Not required.<br>(b) Not required<br>(c) Not required. |
| **22.** | **Whether there is any Government order/Policy relevant/relating to the site?** | Lease has been Allotted by DM Jhansi vide letter no. 409/30 M.M.C/ 2010-20 dated 20.06.2018 |

| Sl. | Item | Details |
|---|---|---|
| 23. | **Forest land involved (hectares)** | No forest land is involved in the project. |
| 24. | **Whether there is any litigation pending against the project and/or land in which the project is propose to be set up?**<br>**(a) Name of the court**<br>**(b) Case No.**<br>**(c) Orders/directions of the court, if any and its relevance with the proposed project.** | None |

## I. ACTIVITY

### .1 Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

| S.No. | Information/Checklist confirmation | Yes/ No | |
|---|---|---|---|
| 1.1 | Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan) | Yes | It is proposed to mine the Sand Stone i.e. Gitti/Boulder from mine lease area. Mining will be carried out strictly as per UPMMCR- 1963 and will be restricted to the Mining Lease Area only keeping the adjoining area unaffected. Under reclamation the mined pit will be filled with the over burden and other mine waste and plantation will be carried out on it. Thus the change in land course of proposed mining lease area will be positive. |
| 1.2 | Clearance of existing land, vegetation and buildings. | No | The proposed plan involves extraction of Boulder from the mining lease area only and since, proposed mining lease area is barren, waste land free from any building and vegetation therefore does not require any clearance of existing land. |
| 1.3 | Creation of new land uses? | Yes | After the completion of the project the present land use of the proposed mining lease area will be changed from the present waste barren upland to plain land scape with plantation work under the reclamation. |
| 1.4 | Preconstruction investigations e.g. bore holes, soil testing? | No | - |
| 1.5 | Construction works? | No | - |

| S.No. | Information/Checklist confirmation | Yes/ No | |
|---|---|---|---|
| 1.6 | Demolition works? | No | - |
| 1.7 | Temporary sites used for construction works or housing of construction workers? | No | Mining is confined in day time only, and laborers from local area will be hired, thus no housing of construction workers is required. |
| 1.8 | Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations | No | No civil work is required in the mine lease area |
| 1.9 | Underground tunneling? works including mining or | No | - |
| 1.10 | Reclamation works? | Yes | Reclamation work shall be done by filling the mined pit with over burden and plantation on it. |
| 1.11 | Dredging? | No | Not Applicable |
| 1.12 | Offshore structures? | No | Not Applicable |
| 1.13 | Production and manufacturing processes? | No | Not Applicable |
| 1.14 | Facilities for storage of goods or materials? | No | After drilling and blasting mined material will be loaded and transported directly through the trucks or trolleys; hence only temporary storage will be required. |
| 1.15 | Facilities for treatment of disposal of solid waste or liquid effluents? | No | There would be no laborers inhabitation at site thus any generation of solid waste or a liquid effluent is not anticipated. |
| 1.16 | Facilities for long term housing of operational Workers? | No | Mining activities is confined to day time only, thus do not involve long term housing of operational workers. |
| 1.17 | New road, rail or sea traffic during construction or operation? | No | haulage road- 0.60 (Km) |
| 1.18 | New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc? | No | haulage road- 0.60 (Km) |
| 1.19 | Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements? | No | No closure or diversion of existing transport routes is anticipated due to the proposed project activities. |
| 1.20 | New or diverted transmission lines or pipelines? | No | Neither any transmission line/ pipeline exist at site nor diversion of any transmission line/ pipeline is proposed under the proposed project. |
| 1.21 | Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers? | No | Boulder mining will be carried out as per UPMMCR- 1963 and will be restricted to Mining Lease Area only unaffecting the adjoining area; hence no change to the hydrology of watercourse or aquifers is anticipated. |

| S.No. | Information/Checklist confirmation | Yes/ No | |
|---|---|---|---|
| 1.22 | Stream crossings? | No | - |
| 1.23 | Abstraction or transfers of water from ground or surface waters? | No | The water requirement of 4.0 KLD for the operational workers will be met through nearby existing borewells and water from these sources will be made available at site by private water tankers. It has been proposed that not more than 22 local labors will be hired from nearby villages. |
| 1.24 | Changes in water bodies or the land surface affecting drainage or run-off? | Yes | Proposed mining will be done systematically & scientifically, as per the mining laws prescribed in the UPMMCR-1963. |
| 1.25 | Transport of personnel or materials for construction, operation or decommissioning? | No | - |
| 1.26 | Long-term dismantling or decommissioning or restoration works? | No | - |
| 1.27 | Ongoing activity during decommissioning which could have an impact on the environment? | No | - |
| 1.28 | Influx of people to an area in either temporarily or permanently? | Yes | It has been proposed that not more than 22 laborers will be employed locally from nearby villages. The influx of the people will be temporary and positive (in terms of employment). |
| 1.29 | Introduction of alien species? | No | - |
| 1.30 | Loss of native species or genetic diversity? | No | - |
| 1.31 | Any other actions? | No | - |

**.2 Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):**

| S.No. | Information/checklist confirmation | Yes/No | Details thereof (with approximate quantities /rates, wherever possible) with source of information data |
|---|---|---|---|
| 2.1 | Land especially undeveloped or agricultural land (ha) | No | Proposed mining lease area (2.023 ha) is undeveloped barren upland. |
| 2.2 | Water (expected source & competing users) unit: | Yes | It is estimated that approx. 0.22 KLD water will be required for a maximum of 22 site workers (@ 10 lpcd). Apart from this 2.90 KLD water will be required for |

<table>
<tr><td></td><td></td><td></td><td>sprinkling on roads & For plantation water use near about 0.77KLD. The total water requirement of water for the proposed project has been estimated to be 3.89 KLD say 4.0 KLD. Thus, total water requirement of will be met through nearby existing borewells.</td></tr>
<tr><td>2.3</td><td>Minerals (MT)</td><td>Yes</td><td>Only sand will be extracted. Proposed quantity: 70,000 m3 / 1,75,000 tons per annum in lease period of 5 years.
<table>
<tr><th>Year</th><th>Quantity of gitty Patthar, boulder ($m^3$)</th></tr>
<tr><td>I</td><td>70000</td></tr>
<tr><td>II</td><td>70000</td></tr>
<tr><td>III</td><td>70000</td></tr>
<tr><td>IV</td><td>70000</td></tr>
<tr><td>V</td><td>70000</td></tr>
</table>
The proposed targeted production for one year will be 70,000 m3 / 1,75,000 tons per annum which shall be supplied to the crusher plant as per the market demand.</td></tr>
<tr><td>2.4</td><td>Construction material – stone aggregates,, and / soil (expected source – MT)</td><td>No</td><td>-</td></tr>
<tr><td>2.5</td><td>Forests and timber (source MT)</td><td>No</td><td>-</td></tr>
<tr><td>2.6</td><td>Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)</td><td>No</td><td>Mining activity will be carried out in day time only and no housing facility for laborers is proposed. Thus electricity or fuel is not required in the proposed project.</td></tr>
<tr><td>2.7</td><td>Any other natural resources (use appropriate standard units)</td><td>No</td><td>-</td></tr>
</table>

**.3 Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.**

| S.No. | Information/Checklist confirmation | Yes / No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 3.1 | Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies) | No | Mining activity will be done manually by using hand tools viz shovels, hammer and chissels etc. and by blasting as per UPMMCR - 1963 thus no hazardous and toxic material will be used or to be generated during operational phase or after. |
| 3.2 | Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases) | No | The proposed project will not cause any changes in occurrence of disease or affect disease vectors. |

| | | | |
|---|---|---|---|
| 3.3 | Affect the welfare of people e.g. by changing living conditions? | Yes | The proposed project will generate employment opportunities to the nearby local people, thus will have short term and positive impact in terms of Socio – Economic development. |
| 3.4 | Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc., | No | There are no sensitive areas i.e. school, hospital present in the vicinity of project site. |
| 3.5 | Any other causes | No | - |

**.4 Production of solid wastes during construction or operation or decommissioning (MT/month)**

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 4.1 | Spoil, overburden or mine wastes | NO | Minor Mineral will be excavated /extracted in its existing form and will be transported directly to the potential domestic/local markets.<br>Over burden or mine waste will be utilized in filling the mined pit under reclamation. |
| 4.2 | Municipal Waste (domestic and or commercial wastes) | No | Mining activities are confined to day time only, thus do not involve long term housing of the operational workers at site, hence no commercial/food waste is expected to be generated. However, provision of bins shall be made at the project site in order to prevent littering of municipal solid waste at site. |
| 4.3 | Hazardous wastes (as per Hazardous Waste Management Rules) | No | No, hazardous waste as listed under Hazardous Waste Handling and Management Rules will be generating due to project activity. |
| 4.4 | Other industrial process wastes | No | No, industrial process is involved. |
| 4.5 | Surplus product | No | - |
| 4.6 | Sewage sludge or other sludge from effluent treatment | No | - |
| 4.7 | Construction or demolition wastes | No | - |

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 4.8 | Redundant machinery or equipment | No | No redundant machinery is required under the proposed projects. |
| 4.9 | Contaminated soils or other materials | No | - |
| 4.10 | Agricultural wastes | No | Boulder mining is not proposed in agricultural land hence no agricultural waste generation is anticipated. |
| 4.11 | Other solid wastes | No | - |

**.5 Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)**

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 5.1 | Emissions from combustion of fossil fuels from stationary or mobile sources | Yes | During operational phase there may be emissions by movement of vehicles (vehicular exhaust) which will be minimized by using only PUC vehicles in the mining lease area and the provisions made in EMP. |
| 5.2 | Emissions from production processes | No | Blasting may cause dust emissions but it will be instantaneous and will be done once a month, thus there will be no harm to the air environment. |
| 5.3 | Emissions from materials handling including storage or transport | Yes | There may be minor emissions i.e. dust, vehicular exhaust anticipated during loading, unloading and transportation of excavated material, which will be minimized under EMP. |
| 5.4 | Emissions from construction activities including plant and equipment | No | Not applicable |
| 5.5 | Dust or odors from handling of materials, including construction materials sewage and waste | Yes | Only dust emissions are anticipated during loading, unloading and transportation of excavated material. |
| 5.6 | Emissions from incineration of waste | No | NA |

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 5.7 | Emissions from burning of waste in open air (e.g. slash materials, construction debris) | No | NA |
| 5.8 | Emissions from any other sources | No | No |

**.6 Generation of Noise and Vibration, and Emissions of Light and Heat:**

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data |
|---|---|---|---|
| 6.1 | From operation of equipment ventilation plant, crushers e.g. engines, | No | |
| 6.2 | From industrial or similar processes | No | NA |
| 6.3 | From construction or demolition | No | NA |
| 6.4 | From blasting or piling | Yes | There will be noise and vibration due to drilling and blasting for which suitable mitigation measures will be taken care off & have been discussed in mine plan prepared according to UPMMCR, 1963. |
| 6.5 | From construction or operational traffic | Yes | No, construction is proposed.<br>Vehicular movement for transportation of mining material from site may generate noise. |
| 6.6 | From lighting or cooling systems | No | NA |
| 6.7 | From any other sources | No | No |

**.7 Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:**

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 7.1 | From handling, storage, hazardous materials use or Spillage of hazardous materials | No | No hazardous waste will be generated. |
| 7.2 | From discharge of sewage or other effluents water or the land (expected mode and place of discharge) to | No | No sewage will be generated. |
| 7.3 | By deposition of pollutants emitted to air into the land or into water | No | - |
| 7.4 | From any other sources | No | - |
| 7.5 | Is there a risk of long term build up of pollutants in the environment from these sources? | No | - |

**.8 Risk of accidents during construction or operation of the Project, which could affect human health or the environment**

| S.No. | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities/rates, wherever possible) with source of information data |
|---|---|---|---|
| 8.1 | From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances | No | No hazardous substances to be stored |
| 8.2 | From any other causes | No | - |
| 8.3 | Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)? | No | - |

**.9 Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality**

| S. No. | Information/Checklist confirmation | Yes/ No | Details thereof (with approximate quantities /rates, wherever possible) with source of information |
|---|---|---|---|
| 9.1 | Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: | No | • Proposed mining lease area is well connected to the • NH-26 about 0.72* km (NE) through local road the nearest road to the proposed mine site, |
| | • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) | No | |
| | • housing development<br>• extractive industries<br>• supply industries<br>• others | No | |
| 9.2 | Lead to after-use of the site, which could have an impact on the environment | Yes | After the excavation of boulder the mine pit will be filled with overburden and mine waste and plantation will be done on it. |
| 9.3 | Set a precedent for later developments | No | - |
| 9.4 | Have cumulative effects due to proximity to other existing or planned projects with similar effects | No | The project will cause positive, long term impact. |

## II. ENVIRONMENTAL SENSITIVITY

| S.No. | Areas | Name / Identity | Aerial distance (within 15 km.) |
|---|---|---|---|
| 1. | Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value | No | No Protected Areas as notified under wildlife (Protection) Act, 1972 is located in whole or in part within the 15km boundary of project site. |
| 2. | Areas which are important or sensitive for ecological reasons -Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests | Yes | Betwa River - 12.0* Km (E)<br>Local River– 5.0 km (E) |
| 3. | Areas used by protected, important or sensitive species of flora or fauna for breeding, | No | - |

| S.No. | Areas | Name / Identity | Aerial distance (within 15 km.) |
|---|---|---|---|
| | nesting, foraging, resting, over wintering, migration | | |
| 4. | Inland, coastal, marine or underground waters | No | - |
| 5. | State, National boundaries | - | - |
| 6. | Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas | Yes | • NH-26 about 0.72* km (NE) |
| 7. | Defense installations | No | - |
| 8. | Densely populated or built-up area (aerial distances) | Yes | Nearest Village<br>• Dangriyaroond, is about 0.89 Km (NE) |
| 9. | Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)* | Yes | Hospital<br>• Jhansi 10.0 km* N |
| 10. | Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)* | Yes | Betwa River - 12.0* Km (E)<br>Local River– 5.0 km (E) |
| 11. | Areas already subjected to pollution or environmental damage.<br>*(Those where existing legal environmental standards are exceeded).* | None | No such areas identified during study. |
| 12. | Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*) | seismic zone III | The mining area is a slightly undulated, unfertile river bed land which falls in seismic zone III, where chances of severe earth quakes are very low. |

"I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date: .....

Place: Lucknow

Sushil Parecha S/o Late. Goverdharn Das Parecha,
R/o A-27 Ramnath City, District- Jhansi, UP

**NOTE:**

1. The Projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z. and the recommendations of the state Coastal Zone management Authority. Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z. Notification, 1991 for the activities to be located in the CRZ.

2. 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."

3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/ Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project".

## 1.0 EXECUTIVE SUMMARY

The salient feature of the project is given below:

<table>
<tr><th colspan="3">2. Basic Information</th></tr>
<tr><th>S. No.</th><th>Item</th><th>Details</th></tr>
<tr><td></td><td>Project Name and Location</td><td>Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh</td></tr>
<tr><td></td><td>Location / site (GPS Co-ordinates)</td><td>
<table>
<tr><th>Pillar No</th><th>N</th><th>E</th></tr>
<tr><td>A</td><td>25° 21’40.05’’ N</td><td>78° 31’ 30.98”E</td></tr>
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</table>
</td></tr>
<tr><td></td><td>Size of the Mining Lease (Hectare)</td><td>2.023 Hec.</td></tr>
<tr><td></td><td>Capacity of Mining Lease (TPA)</td><td>Proposed Production: 70,000 m3 / 1,75,000 tons per annum</td></tr>
<tr><td></td><td>Period of Mining Lease</td><td>20 Years</td></tr>
</table>

| | | |
|---|---|---|
| | Expected cost of the Project | Rs. 80.0 lakh per Year |
| | Name and Address of the Applicant | Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP Tehsil-Moth, District- Jhansi (U.P.) |
| | Land Use | Govt Waste Land |
| | Minerals of mine | Khanda, Gitty/Boulders (Building stone) |
| | Method of mining | Opencast, Manual/Semi-mechanized |
| | Drilling/Blasting | Proposed as per Drilling and Blasting rules. |
| | Sources of water | Nearby dugwell /borewells or private tankers. |
| | Solid Waste | Temporary laborers from nearby villages are hired, no generation of solid waste is generated due to proposed project activity. |

## 2.0 INTRODUCTION

### 2.1 Identification of Project/ project background

The lease over an area of 2.023 ha is granted to Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh

**Name and address of project proponent:**

Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP

### 2.2 Brief description of the nature of the project

The proposed project under operation is to mine Khanda, Gitty Boulder (Building stone) for a period of 20 years having production capacity Proposed Production: 70,000 m3 / 1,75,000 tons per annum minor mineral will be extracted with sustainably and scientifically. Following geo-scientific methods are under taken to carry out the activity.

**Existing Method of mining:**

It was opencast manual/ Semi-mechanised mine with adoption of drilling & blasting. Drilling was carried out with 32mm dia jack hammer drill rods & blasting material was explosive. The blasted material broken by manually up to sized 2ft & loaded into tippers manually dispatch to crusher plant which is about 1.5km away from mine site. Mining was carried through the formation of one bench. The height of bench was kept 6.0m width of benches was kept 6.0m with face slope 60°. Approach road having width 5 m & gradient 1:16 was provided to mining faces from the transportation of mineral.

**Proposed method of mining:**

It shall be opencast semi-mechanized mine. To meet required production wagon drilling with deep hole blasting shall be carried out. The blasted material will be handelled with excavator & loaded into dumpers. The height & width of bench shall be kept 6m with face slopes 70o. Secondary blasting with jackhammer drilling shall be carried out if required.

Indicate quantum of development & tonnage & grade of production expected pit wide as in table below:

| Year | Overburden (cum) | ROM Gitty/Khanda Boulder (cum) |
|---|---|---|
| 1st | Nil | 70000 |
| 2nd | Nil | 70000 |
| 3rd | Nil | 70000 |
| 4th | Nil | 70000 |
| 5th | Nil | 70000 |
| **Total** | | **3,50,000** |

## 2.3 Need for the project and its importance to the country and region

The Gitty will be used for making the aggregates. The Gitty of lease area is hard, medium to coarse grained greyish in color & porphyritic texture.

The production of Gitti/boulders benefits to the state in the form of royalty. Apart from this project operation is providing employment directly and indirectly to the people residing in vicinity, thus improving the Socio-economic status of the area.

## 2.4 Demands-Supply Gap

Gitti/Boulders has become a very important mineral for the expansion of society. With the increase of urbanization the demand for Gitti/Boulders is growing in infrastructure sector in our country. The mineral is used for making concrete, filling roads, building sites, brick making, making glass, Gitti/Boulders papers, reclamations etc.

Individual and private companies are increasingly demanding Gitti/Boulders for construction purposes and this has immense pressure on Gitti/Boulders resources. This increasing demand makes this an environmental issue.

Gitti/Boulders is one of the most plentiful natural resource and has got ability to replenish itself. The demand of Gitti/Boulders is directly proportional to the supply.

## 2.5 Imports vs. Indigenous Production

There will be no import for the project. There will be indigenous inputs in the entire mining activity.

## 2.6 Export Possibility:

In Jhansi district of Uttar Pradesh, numbers of Gitti/Boulders mines are there. There is abundance of Gitti/Boulders in the area; it had become a major raw material for the infrastructure development and is at high demand in the north-west Uttar Pradesh .The proposed mining project will fulfill its end uses in buildings and construction, paving, monuments and many other exterior projects.

## 2.7 Domestic/ Export Markets

Due to the increased industrial and infrastructural growth of the rural and urban areas demand of Gitti/Boulders is very high. Construction

companies and local vendors in the nearby town and cities are the potential market for the minor minerals.

### 2.8 Employment Generation (Direct and indirect) Due to project:

Yes, through this project peoples get employment. The project directly generates the employment for the local people and indirectly for the others. Also the marketing of the product generates the employment for peoples. By this project, approximately 22 persons employed directly on project site.

## 3.0 PROJECT DESCRIPTION

### 3.1 Type of project including interlinked and interdependent projects, if any

This is an independent under operation of a mining project. The proposed project is for the extraction of Gitti/Boulders manually and mechanically.

### 3.2 Location (map showing general location and project boundary and project site specific layout) with coordinates.

The lease hold falls in village Dangriyaroond which is about 10 km from Jhansi on Jhansi-Lalitpur National Highway No 26. A diversion takes place from village Dangriyaroond by unmettaled road & it is about 0.70 kms leads to the project site.

| Point | Latitude | Longitude |
|---|---|---|
| **A** | 25° 21’40.05’’ N | 78° 31’ 30.98”E |
| **B** | 25° 21’38.21’’ N | 78° 31’ 34.50”E |
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| **H** | 25° 21’37.84’’ N | 78° 31’ 29.49”E |

### 3.3 Details of alternate sites considered and the basis of selecting the proposed site, particularly the environment considerations gone into should be highlighted:

No, alternative sites considered.

### 3.4 Size or Magnitude of operation:

- The mine has lease agreement over an area of 2.023 ha. Only Gitti/Boulders is to be extracted, Approximately 70000 m3 /Annum minor mineral will be extracted.

### 3.5 Project description with process details:

The under operation project is to mine Gitti/Boulders from river bed sustainably and scientifically. Mining will be opencast manually and mechanically. Following geo-scientific methods are proposed to carry out the activity:

- It shall be opencast semi-mechanized mine. To meet required production wagon drilling with deep hole blasting shall be carried out. The blasted material will be handelled with excavator & loaded into dumpers. The height & width of bench shall be kept 6m with face slopes 70o. Secondary blasting with jackhammer drilling shall be carried out if required.

### 3.6 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Product/S, Mode of Transport of Raw Material and Finished Product:

The operation involves the extraction of Gitti/Boulders and loaded into trucks and will transport the material to the local market directly. The existing roads are being utilized for the transport of Gitti/Boulders from mine site to market.

**3.7 Resource optimization/ recycling and reuse envisaged in the project, if any, should be briefly outlined**

Mineral will be utilized and sent for use to different end users. Some of the rejects /waste will be used for the maintenance of roads. Rainwater harvesting will be done in excavated pit void and will be used for water conservation thereby reducing exploitation of groundwater.

**3.8 Availability of water its source, energy/ power requirement and source:**

a. **Water requirement:-**

There is very little requirement of water to carry out operation as it is being done manually. The water is required either for drinking purposes or for dust suppression. Total required manpower is 22 for the project. The drinking water requirement will be 3.89 KLD, which is met by tankers. The water required for dust suppression is taken from tankers.

**b. Energy power source:-**

All the activities are being carried out manually and mechanically. The operation is being done in day time; hence there is no power requirement for the project at site.

**3.9 Quantity of wastes to be generated (liquid and solid) and scheme for their management/ disposal.**

The entire mineral extracted is saleable. The laborers from nearby villages are hired to carry out work in day time only, hence there is no or very less waste is generated expected to generate. No liquid effluent is generated at site.

## 4. SITE ANALYSIS

**(i) Connectivity:**

The lease hold falls in village Dangriyaroond which is about 10 km from Jhansi on Jhansi-Lalitpur National Highway No 26. A diversion takes place from village Dangriyaroond by unmettaled road & it is about 0.70 kms leads to the project site

## 5.0 PLANNING BRIEF

**5.1 Planning Concept (type of industries, facilities, transportation etc) Town and Country Planning/Development authority Classification:**

The mineral is being directly transported to the nearby markets in towns and cities. No mining activity is to undertaken during the monsoon season. So the river bed material is to be replenished during the monsoon season every year.

The project is under operation to mine Gitti/Boulders from river bed sustainably and scientifically. Mining is opencast manually along the centre of river bed keeping both the shores unaffected.

### 5.2 Population projection

There is no permanent influx of the population, as the workers are being hired locally from nearby villages.

### 5.3 Land use planning

The land use of the mine lease area is the river bed of River and there is no change in landuse after operation as the Gitti/Boulders will be replenished every year during the monsoon season. The ultimate land use of the mine lease area will not be change.

### 5.4 Assessment of Infrastructure Demand (Physical & Social)

Extracted mineral transported directly to the local markets, there is no stock yard required for storage, also the workers are hired locally and temporarily, no housing facility is required.

### 5.4 Amenities/facilities

Temporary rest shelters, drinking water and first aid facility will be made available to the mine workers.

## 6.0 PROPOSED INFRASTRUCTURE

### 6.1 Industrial area (Processing Area)

No industrial area is proposed.

### 6.2 Residential area (Non Processing Area)

The mine workers are hired from nearby villages, no housing facility is required.

### 6.3 Green belt Development

The lease area is marked by large exposure of barren land. The lease area is rocky terrain so it is not feasible to undertake the

plantation with in lease hold. The plantation will be undertaken outside the lease area around crusher plant.

The tree species recommended are Ficus religosa (pipal), Boswellia serrata (Salai), Shorea robusta (sal) and tactone grandis (teak) may also be recommended. Mangifera indica (Aam), Emblica officinalis (Anwala), Aegle marmerlos (Ibei), Planting should be done in large sized 90 cm x 90 cm. due in advance and filled about 50 days before planting. The plantation raised earlier should be carefully maintained. Mortalities should be replaced by fresh planting.

## 6.4 Social Infrastructure

Temporary rest shelters, drinking water and first aid facility are made available to the mine workers.

## 6.5 Connectivity:

The lease hold falls in village Dangriyaroond which is about 10 km from Jhansi on Jhansi-Lalitpur National Highway No 26. A diversion takes place from village Dangriyaroond by unmettaled road & it is about 0.70 kms leads to the project site

## 6.6 Drinking Water Management (Source & Supply of water)

In order to meet the drinking water requirement for site workers water from dug wells/bore wells by tankers are used.

## 6.7 Sewerage System

No sewerage system is required at the mine site.

## 6.8 Industrial Waste Management

Not applicable

## 6.9 Solid Waste management

No solid waste generation is expected from the mining operation.

## 6.10 Power Requirement & Supply/ Source

All the activities are being carried out manually and mechanically. The operation is restricted to day time only; hence there is no power requirement for the project at site.

## 7 .0 REHABILITATION AND RESETTLEMENT (R&R) PLAN

Not Applicable

## 8.0 PROJECT SCHEDULE & COST ESTIMATES

The total cost of project is approx Rs. 80.0 Lakh per Year

## 9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATION)

Overall the project will have positive and long term impact on environment. The project will also bring positive changes in terms of socio economic development by way of generating direct and indirect employment opportunities to the people of vicinity.

**********

## ENVIRONMENT MANAGEMENT PLAN

### 1.1. INTRODUCTION

Environment Clearance is sought for extraction of proposed capacity Expansion of Sandstone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh of Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP

The Mining is proposed in a barren hilly uncultivated government land.

- Environment Clearance is required for lease period of the mining as per lease deed.
- Proposed mining lease area is 2.023 ha.
- It has been proposed that approximately 70,000 m3 / 1,75,000 tons per annum of Building Stone (Gitti-Pathhar, Khandas, Boulder).
- Latitude: 25° 21’40.05’’ N
- Longitude78° 31’ 30.98”E
- There is no National Park, Sanctuary, Elephant/Tiger Reserve, eco-sensitive area, Interstate boundary, migratory routes within 05 km of the project site.

The proposed project falls under item 1(a), category ‘B*’ (sub category B-2) as it does not attract General Condition as specified in Environment Notification, 2006.

**Since there are no protected areas notified under the Wildlife (Protection) Act, 1972, critically polluted areas, notified Eco sensitive area, interstate boundaries are falling in whole or in part within 05 km radius of the proposed project, general conditions are not applicable to proposed project.*

### 1.2. ENVIRONMENTAL & SOCIAL LEGAL POLICY AND INSTITUTIONAL FRAMEWORK

**1.** The EIA Notification of the MoEF, 14th September 2006 warrants environmental clearance from the SEIAA for Mining of Minerals (section 1(a) as the case may be. Apart from the EIA notification, the Government of India has laid out various policy guidelines, acts and regulations for protection of environment. Summary of relevant legal requirements considered for this project are tabulated below. The mining sector has separate set of legislations covering management, conservation, grant and operation of mining lease. In addition to that, there are environmental/forest regulation, applicable to mining of minor minerals as prescribed by MoEF and CPCB time to time are tabulated as under-

**Table 1: Acts and Legislations applicable to the project**

| S. No. | Acts and Legislations | Year |
|---|---|---|
| 1. | The Mines Act | 1952 |
| 2. | Mines Rules | 1955 |
| 3. | The Mines and Mineral (development and Regulation) Act | 1957 |
| 4. | Mineral Concession Rules | 1960 |
| 5. | Mineral Conservation and Development Rules | 1988 |
| 6. | Uttar Pradesh Minor Mineral Concession Rules | 1960 |
| 7. | Granite Conservation and Development Rules | 1999 |
| 8. | The Environment (Protection) Act, MoEF, CPCB | 1986 |
| 9. | Notification on Environment Impact Assessment of Development projects (and amendments) (referred to as the Notification on Environmental Clearance) MoEF, CPCB | 2006, 2009 |
| 10. | Wildlife Protection Act, MoEF | 1972 |
| 11. | The Forest (Conservation) Act, MoEF | 1980 |
| 12. | Water (Prevention and Control of Pollution) Act (and subsequent amendments), CPCB | 1974 |
| 13. | Air (Prevention and Control of Pollution) Act (and subsequent amendments), CPCB | 1981 |
| 14. | National Resettlement and Rehabilitation Policy, | 2007 |

**2.** Honorable Supreme Court has given the ruling, dated 27.02.12, for obtaining prior EC of the mining lease area of less than five hectares (< 5 Ha) also. The gist of the ruling is as under:

"*We in the meanwhile, order that leases of minor mineral including their renewal for an area of less than five hectares be granted by the State/Union Territories only after getting environmental clearance from the MoEF ordered accordingly*."

## 1.3. PROJECT TECHNOLOGY /PROCESS DESCRIPTION

The Proposed Environmental Clearance of mining lease for Building Stone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh .

The Following geo-scientific methods are proposed to carry out the activity:

- Mining will be confined to extraction of Granite (Gitti, Boulder & Khandas) over the lease area only.
- Mining of Granite (Gitti, Boulder & Khandas) will be restricted to a maximum depth of 18 m from top level and will not intercept the water table in the area.
- Blasting shall be performed under the supervision of competent blaster & Mines manager.
- Approximately 8900 cubic meters per annum Granite (Gitti, Boulder & Khandas) will be extracted.
- No mining activity will be undertaken with in 7.5m barrier and plantation shall be done on both side of haulage route progressively every year.
- The mining activity will be restricted to daytime only in order to avoid environmental pollution or any accidental hazards.
- The operation will remain opencast semi-mechanized. The deposit will be worked from the top surface to downward by making 6m x 6m benches along the slope & below.

To formulate a suitable environmental management plan depicting all mitigation measure it is necessary to have a scientific assessment of all the impacts of the project activity on various environmental domains that exist in the area, it can also help in implementing the project in eco-friendly manner. The following domains of environment will be taken into consideration while preparing the EMP of Granite (Gitti, Boulder & Khandas) mining.

- Land use pattern
- Air Quality
- Noise Quality
- Water Quality
- Ecological Condition
- Socio-Economic Condition

The various allied processes used during mining activity which are supposed to affect various environmental domains of the area are follows:-

- Excavation
- Construction of approach and haulage road
- Drilling & Blasting
- Loading and Transportation
- Disposal of overburden/waste etc.
- Site preparation

The magnitude of the proposed mining activity being small is not likely to create any serious impacts on the existing environmental set up of the area. However, the likely impacts of the proposed mining and allied activities on the various environmental parameters are discussed as under and tabulated in separate heads.

| IMPACT AREA | PROBABLE IMPACTS | PROBABLE SOURCE | MITIGATION MEASURES | REMARKS |
|---|---|---|---|---|
| LAND USE | Change in land use pattern | Site preparation<br>Excavation<br>Construction of approach and haulage road.<br>Drilling & Blasting.<br>Disposal of overburden/ waste etc. | At any point of time, area under reclamation should be kept at minimum by ensuring simultaneous reclamation of land along with mining activity to reduce the time gap between land reclamation and mitigation.<br>The scheme of Plantation has been proposed all along the approach road of lease area & will be made accordingly. The selection of plant species will be based on the local soil conditions. Post plantation care like watering and protection from grazing will be done by proving tree guard / fencing.<br>The top soil shall be scraped manually and send to the plantation site directly.<br>Number of access roads to mining site should be kept minimum.<br>Stockpiling of stone shall be avoided.<br>There shall be no waste generated during the mining as all the ROM shall be used in making aggregates | The existing land form is hilly barren terrain there is no forest land in the lease area, the land use is waste land and ownership is owned by state government.<br>There is no agriculture in the vicinity of lease area so mining will not have any impact on agricultural pattern.<br>Aesthetic environment will also be not affected as the mine lease area is waste land (rocky terrain) with some bushes only. |

| IMPACT AREA | PROBABLE | PROBABLE SOURCE | MITIGATION MEASURES | REMARKS |
|---|---|---|---|---|
| AIR QUALITY | Probable contamination of air with dust and exhaust gases of the vehicle transporting stone and by NOx drilling operations. | ▯ The dust generated from mining activities is the primary source of air pollution. The emission sources include excavation and mining of stone, drilling, sizing and transportation within the project area.<br>▯ Negligible amount of auto exhaust emissions also expected to be found in the core zone because of vehicular activities arising due to transportation of limestone and waste by dumpers and Excavators.<br>▯ NOx generated from blasting<br>▯ Storage of | ▯ As the primary concern in air quality is emanated dust to dust suppression system mainly water spraying is to be done in and around mining area.<br>▯ Use of sharp drill bits for drilling holes and drills with water flushing system to reduce dust generation at source.<br>▯ Loading of mineral should be done at optimum height so as to reduce the dust below.<br>▯ Overloading will be prevented. The trucks and trolley after loading will be covered by suitable cover.<br>▯ Timely maintenance of vehicle used for transportation of mineral shall be ensured.<br>▯ Green belt all along mining area & haulage roads shall minimized the impact. | Spreading of dust particles shall be negligible as the dust shall be suppressed at source. However, plantation all along lease boundary & haulage roads shall act as dust arrester & sink hole for suspended particles. |

| WATER QUALITY | | | | |
|---|---|---|---|---|
| **IMPACT AREA** | **PROBABLE IMPACTS** | **PROBABLE SOURCE** | **MITIGATION MEASURES** | **REMARKS** |
| **SURFACE WATER** | Change in quality as well as quantity. | Waste generated due to mining.<br>Due to runoff water from the rain.<br>Due to disposal of waste by labors.<br>Due to washing of vehicles used in transportation<br>Due to disposal of | Waste shall not be generated as all the quantity of ROM shall be used in making aggregates.<br>Massive plantation in and around lease area and haulage road.<br>Rainwater accumulated in worked out pit will be collected and will be used for dust suppression and green belt development.<br>Retaining wall & Check dam construction all along slope.<br>Drains all along road side. | Mining will be done above the water table in leased area which is waste land and there is no river or surface water exists within this area. However, composition of granitic rock merely reacts with surface water as it |

| IMPACT | PROBABLE IMPACTS | PROBABLE SOURCE | MITIGATION MEASURES | REMARKS |
|---|---|---|---|---|
| **GROUND WATER** | Interception, diversion, contamination and wastage of ground water | Digging and excavation.<br>Piling of overburden. | Regular monitoring of ground water.<br>Piling of overburden will be avoided<br>Whenever the mining reaches the water table the leaseholder should dig a separate well in the lease area itself in which water from mining pit is disposed with objective of | No interception diversion or contamination of groundwater because Mining will be done above the water table in leased area. There is not any generation of toxic waste from mining site and ground water is not used for any mining activity Except, drinking purpose which shall be procure from nearby hand pump/ tube well.<br>Bottom of the excavated |

| IMPACT AREA | PROBABLE IMPACTS | PROBABLE SOURCE | MITIGATION MEASURES | REMARKS |
|---|---|---|---|---|
| NOISE QUALITY | Increase in Noise level of the area which will affect the inhabitant residing nearby and there. | Drilling & blasting<br>Heavy earth moving machinery<br>Due to vehicle used for transportation of excavated material<br>Accumulation of labor in mining area, noise is created from their verbal communicationand manual excavation. | Drilling & Blasting shall be performed under the supervision of competent Blaster & Mines Manager with Optimum hole charge by using delay detonators & muffle blasting to minimizes nose impact & rock fly<br>Care will be taken to produce minimum sound during loading of mineral.<br>Minimum use of horn and provision of speed limit will be ensured.<br>Timely maintenance of vehicles and their silencers | Noise limit shall be within 90db limit during mining operation by using these mitigation norms. |
| ECO-LOGICAL /BIO-LOGICAL | Loss of flora and fauna residing there and nearby. | Site preparation<br>Excavation<br>Construction of approach and haulage road<br>Drilling | No measure loss has been noticed so no mitigation measure is proposed | Mining is done on mining lease area which is barren, unfertile. No wildlife of any sort is found within lease hold area. The fauna found in the area are of common variety and no endangered or threatened species are reported in the area. |

| IMPACT AREA | PROBABLE IMPACTS | PROBABLE SOURCE | MITIGATION MEASURES | REMARKS |
|---|---|---|---|---|
| OCCUPATIONAL HEALTH | ▯ Workers of area likely to get affected by respiratory or pulmonary diseases like bronchitis, silicosis and asthma fungal infection.<br>▯ Water related disease such as diarrhea, dysentery etc.<br>▯ Minor accidents such as cut and bone | ▯ Due to emanation of dust, exhaust and noise from vehicle transport.<br>▯ Due to lack of personnel hygiene<br>▯ Due to lack of personal safety procedure | ▯ First aid facility will be provided at mining site.<br>▯ Training of the worker regarding use of safety appliances and first aid.<br>▯ Every six month Periodical medical examination of all workers by experienced medical professional shall be ensured.<br>▯ Training shall also includes emergency response including location and proper use of emergency equipment, procedure for raising alarm and notifying contractor and proper response action for each foreseeable emergency situation. | |
| DEMOGRAPHY/ SOCIO-ECONOMY | Strain on existing amenities like housing, water sources and sanitation, medical and infrastructure Facilities. | Influx of employees as well as contractor's employee/laborers. | Only local peoples in limited numbers and residing in nearby area will be employed as man power. | No additional impacts |

## RISK ASSESSMENT & DISASTER MANAGEMENT PLAN

Environment Clearance is sought for extraction of proposed capacity Expansion of Sandstone (Gitti-Pathhar, Khandas, Boulder) mine, at Gata No./Araji No. /Plot no. – 310, Khand No.01, Area 2.023 ha. (5.0 Acres) at Village – Dangriyaroond, Tehsil- Jhansi, District- Jhansi, Uttar Pradesh of Shri Sushil Parecha S/o Late. Goverdharn Das Parecha, R/o A-27 Ramnath City, District- Jhansi, UP

### 1.1 RISK ASSESSMENT:

Risk assessment is all about prevention of accidents and there is a need to be aware that there is a risk of an accident before steps can be taken to prevent its happening. This is the reason, why risk assessments will be carried out. The proposed mining activity will be opencast semi-mechanized mining project. The anticipated risks are mentioned below:

#### 1.1.1 INUNDATION:

Mining operations will not intercept the ground water table. Therefore, disturbance to ground water quality or depletion are not envisaged. In order to control the in-rush of water from the surface or through seepage from the strata during monsoon, sufficient garland drains will be constructed around the opencast excavation as proposed. The rain water falling directly into the open excavation will automatically drain out and there is no need to install pumps except to pump out the rain water collected in the pit during monsoons from bottom most benches to facilitate mining.

#### 1.1.2. FAILURE OF PIT SLOPE:

Slope failures in mines are mostly associated with circular failure, which is controlled by the rock mechanics properties such as cohesion, angle of internal friction, joint/shear planes, ground water flow conditions, rock density and the heights to be maintained. To control the above factors the pits are designed to be developed with benches, with an overall slope angle of 300. Further the top benches of the will be afforested to provide long term stability. Thus the chances of slope failures for the pits are remote. All necessary precautions will be taken.

#### 1.1.3. FAILURE OF WASTE DUMPS:

Sliding of waste dump will be a severe risk compared with quarry slope failure. Hence, it is imperative that the degree of hazard against potential failure of waste dump slope should be identified and that precautionary measures will be adopted, if required. The height of outside dumps will be restricted to 10m. The waste dumps will be designed with intermittent berms with an overall slope of 300. A strong retaining wall will be constructed at the bottom of the dump to

give toe support and for proper drainage from the waste dump. Garland drains will be provided to collect the drainage flow. Since the waste dumps will be proposed to be constructed over a hard rock surface, chances of foundation failures will be remote. As controlled blasting techniques will be implemented with small size Jackhammer blast holes with limited explosive charge, there are no chances ground vibrations to reach the dump area and creating problems of liquefaction. Further the slopes of waste dumps will be afforested to provide long term stability. Thus the chances of slope failures for the dumps are remote.

### 1.1.4. SURFACE FIRE:

Sufficient fire extinguishers will be installed at selected locations on surface like office, workshop, Garage, Stores etc. for fire protection.

### 1.1.5. DUST FROM THE DRILLING OPERATION:

The hazard is the inhalation of dust which is created during the drilling operation. While it is not presently possible to totally remove the hazard, properly applied control measures can substantially reduce the risk. Control measures vary from using water during the drilling operation to the provision of local exhaust ventilation which removes the dust from the head of the hole to a
dust collection unit to the provision of a ventilated cabin provided for the operator. The most effective of these precautions will be the provision of a control cabin on the drilling rig provided with a suitable ventilation system fitted with a dust filter to remove harmful dust and maintain the dust level within the cabin to below acceptable control levels. Any ventilation equipment should periodically be examined to ensure that it is maintained to its designed standard.

### 1.1.6. NOISE:

Drilling, wire saw cutting & movement of vehicles will be give rise to high levels of noise. Both drilling the hole and the operation of the drill rig itself creates noise. It is impractical to remove the hazard at the hole but new generations of drill rig should be quieter by virtue of its design. The noise created is harmful to anyone who is within a zone around the operation of the machine at which the noise level will be above that considered to be safe for persons to work without having to use control measures. The noise levels around drilling & wire saw cutting equipments should be measured and the risk assessed. Unless control measures are in place no-one, except those necessary for the work in hand, should be allowed inside the designated noisy area. Other control measures will include providing enclosure, development of green belts in the surrounding areas, training the operators and providing them with ear protection, although the latter should only be seen as an

interim precaution until a permanent solution can be found. The risk is very high when no control measures are provided. However if all the mitigation measures are provided the risk will be very low.

### 1.1.7. LOADING:

The main hazard associated with loading is toppling over due to uneven ground, failure of hydraulic systems, fires and falls while gaining access to operating cabins.

### 1.1.8. TRANSPORT VEHICLES:

The main hazards arising from the use transport vehicles will be incompetent drivers, brake failure, lack of all around visibility from the drivers position, access to the cab, vehicle movements particularly reversing, roll over, vibration, noise, dust and maintenance. The possible risks include the driver and pedestrians likely to be struck by the vehicle, and drivers of smaller vehicles, which cannot be seen from the cabs of large vehicles. Visibility defects can be eliminated by the use of visibility aids such rear view mirrors. Good maintenance and regular testing are necessary to reduce the possibility of brake failure. An area should be earmarked as a testing area where daily tests are carried out on the effectiveness of a vehicles braking system. Careful attention must be paid to guarding dangerous parts of the equipment and handling heavy components during maintenance work. Those most at risk will be the users of the system although casual pedestrians
and vehicle operators may also be at risk.

## 1.2. RISK CONTROL MEASURES:

### 1.2.1 HOUSE KEEPING:

The provision and maintenance of a safe and healthy workplace will be the most basic principle of health and safety. Dirty and untidy workplaces or walkways contribute to a very large proportion of toppling and fall accidents. In the context of surface mining the provision of well defined roadways and walkways clear of obstruction, and regular cleaning up of spillage will greatly reduce the potential for this type of accident. Lack of maintenance may lead to roadways and walkways being unsuitable for their use.

### 1.2.2 THE WORK:

The application of risk assessment depends upon a full understanding of all aspects of the job being undertaken. In carrying out a risk assessment in relation to a particular task the evaluation must include a review of the knowledge, experience and training of those persons carrying out the work.

### 1.2.3 PERSONAL COMPETENCE

If follows that the knowledge, experience and training of personnel involved in work is critical to the result of any risk assessment. A knowledgeable, experienced well-trained and competently supervised workforce will be at a lower risk of accidents occurring than a poorly trained and badly supervised workforce.

### 1.2.4 CO-ORDINATION:

A qualified & trained person should be given the responsibility for overseeing and coordinating work. It is essential that the coordinator ensures that everyone engaged in the work is capable and understands the role of others and their responsibility for each other. This is particularly important when contract workers undertake part or all of the work to be carried out.

### 1.2.5 WORKPLACES:

Access to both above and below ground workplaces should be by well constructed and maintained permanent fixed means. When practical stairways and shallow inclined walkways are preferred to vertical ladders, which in some circumstances can be the cause of very high risk. The sides of all workplaces from which persons may fall should always be protected.

### 1.2.6 HEALTH HAZARDS:

For the purposes of this document health hazards should be interpreted as being harmful dust, which will be emitted during surface mining operations, as well as the handling of heavy loads. While elimination and often complete suppression at source is not practicable, the norms for control of health hazards shall be made applicable.

### 1.2.7 PERSONAL PROTECTIVE EQUIPMENT (PPE):

The PPE should meet ISI standard, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particular hazardous dust, and maintained to recommended standards.

As personal protective equipment only affords limited protection it should only be used as a last resort and then as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level.

### 1.2.8 TRAFFIC MOVEMENT:

The traffic movement should only take place within designated areas and over suitable roadways.

**Risk Assesssment**

Adopting one way traffic movement systems are preferred to two directional traffic systems. The risk of accidents due to traffic movement is much less with a one. Whenever mineral will be mined, the first step in winning the product is the preparation of the site. The four main stages in the site preparation are:

1. Planning
2. Surveying
3. Laying out

**Planning:**

The risk of injuries can be significantly reduced if sufficient regard will be given to health and safety at the planning stage of a new mine. Using trained drivers can largely eliminate the danger of being struck by large moving vehicles and providing the vehicles with suitable appliances, such as aids to ensure the driver has all round visibility. Designing and implementing one-way traffic systems and
ensuring that open edges of roadways are suitably protected to prevent accidental driving off the edge can further reduce the danger. Additionally, ensuring that the vehicles are properly maintained in good working condition, particularly the braking system, will go a long way to help the driver control the vehicle. Well-designed access and working platforms will also reduce the
possibility of a fall.

**Surveying:**

Surveying has its hazards, for example surveyors are likely to be seriously
injured if they fall from heights or are thrown out of overturning vehicles. Since the hazards are created by ground formation it is unlikely that they can be removed. Those normally at risk would be the surveying team of the surveyor and assistants. Individuals working at the edge of vertical faces or on very steep undulating ground will be at greater risk than those working on level ground.

Driving over steep rough terrain is more dangerous than driving over gentle slopes. It is necessary to give clear positive instruction and ensure vehicles used to gain access to the areas to be surveyed are well maintained and suitable for the terrain over which access is to be gained.

**Lay Out:**

There are many different ways of opening of mines, but careful planning particularly concerning the mine layout will reduce hazards. Good well maintained equipment is essential to reduce the risk of injuries. If suitable equipment will not be used, for example if poor and badly constructed scaffolding is used there will be a much higher probability of persons falling from heights or the scaffolding collapsing than if good properly constructed scaffolding will be used. To reduce the risk of injuries, the

vehicle drivers and those giving signals should be well trained. The lack of training and competence in the use of such equipment is the biggest cause of accidents.

### 1.3. DISASTER MANAGEMENT PLAN:

The complete mining operation will be carried out under the management control and direction of a qualified mine manager. The DGMS have been issuing a number of standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff is being sent to refresher courses from time to time to keep them alert. Natural calamities such as earthquakes, landslides, floods etc., can also contribute to disaster. However, following natural/industrial hazards may occur during normal operation.

- Inundation of mine pit due to flood/excessive rains.
- Accident due to transport & others.
  In order to take care of above hazard/disasters the following control measures have been adopted.
- Regular inspection of the mine for the observance of any visible cracks.
- Checking and regular maintenance of garland drains and earthen bunds to avoid any inflow of surface water in the mine pit during rainy season.
- Provision of high capacity pumps for pumping out water from the mining pit.
- All safety precautions and provisions of metalliferous mine regulation 1961 is strictly followed during all mining operations.
- Entry of unauthorized persons is prohibited.
- Fire fighting and first-aid provisions in the mines office complex and mining area. Provisions of all the safety appliances such as safety boot, helmets, goggles etc. are made available to the employees and regular check for their use.
- Cleaning of mine faces is regularly done.
  Regular maintenance and testing of all mining equipment as per manufacture’s guidelines.
- Suppression of dust on the haulage roads.
- Increasing the awareness of safety and disaster through competitions, posters and other similar drives.

The management is able to deal with the situation efficiently to reduce confusion keeping in view of the likely sources of danger in the mine.

#### 1.3.1. STRUCTURE OF THE DISASTER MANAGEMENT PLAN OUTLINE OF DISASTER MANAGEMENT PLAN:

The purpose of disaster management plan is to restore the normalcy for early resumption of mining operation due to an unexpected, sudden occurrence resulting

to abnormalities in the course of mining activity leading to a serious danger to workers or any machinery or the environment.

### 1.3.2 SYSTEM OF COMMUNICATION:

Having an internal direct communication system for the department head and to their line of command. Having the telephone nos. and addresses of adjoining mines, rescue station, police station, Fire service station, local hospital, electricity supply agency and standing consultative committee members.

### 1.3.3 FACILITIES & ACCOMMODATION:

Accommodation and facilities for medical centre, rescue room and for various working groups will be provided.

### 1.3.4 FIRST AID & MEDICAL FACILITIES:

The mine management will provided first aid / medical centre for use in emergency situation. All casualties would be registered and will be given first aid. It will have proper telephone / wireless set for quick communication with hospitals where the complicated cases are to be sent.

### 1.3.5 DISASTER MANAGEMENT TEAM:

In order to handle disaster/emergency situations, an organization chart entrusting responsibility to various project personnel has been prepared with their specific roles during emergency The composition of the management team:

1. Agent (Mines)
2. Mines Manager

### 1.3.6 INFRASTRUCTURE:

Following infrastructure and operational system shall be provided to meet any emergencies.

**Emergency control room:**

This is situated in an area away from the places of fire and has been provided with the following
facilities:

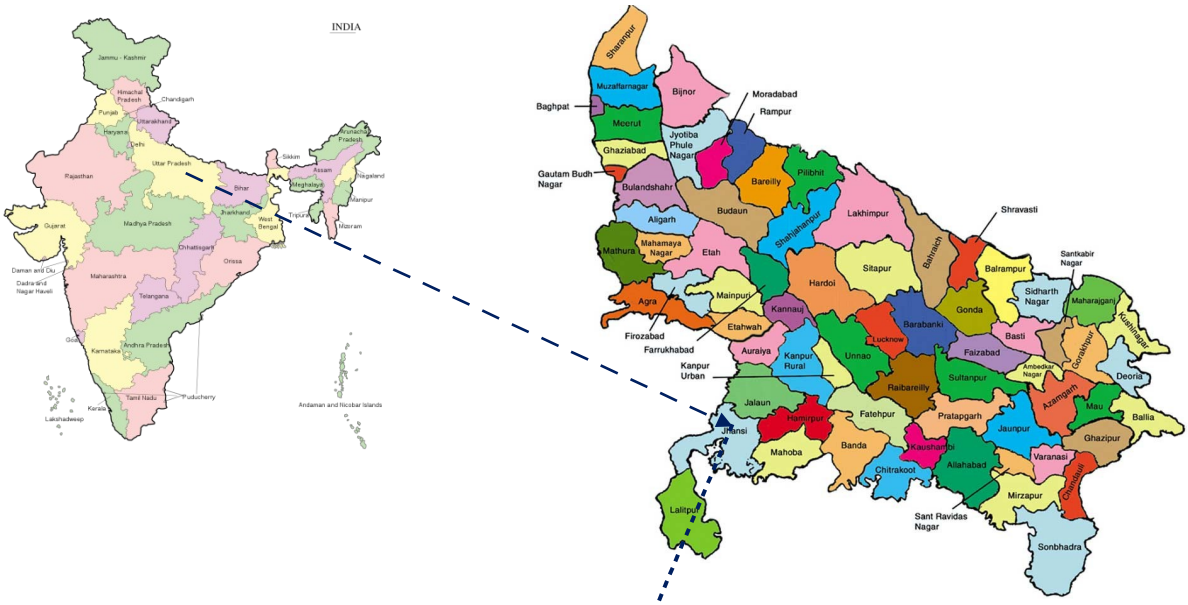
a. Master plan of the mines.
b. First aid boxes.
c. Telephone line
d. Emergency lighting system.
e. Transport facility.

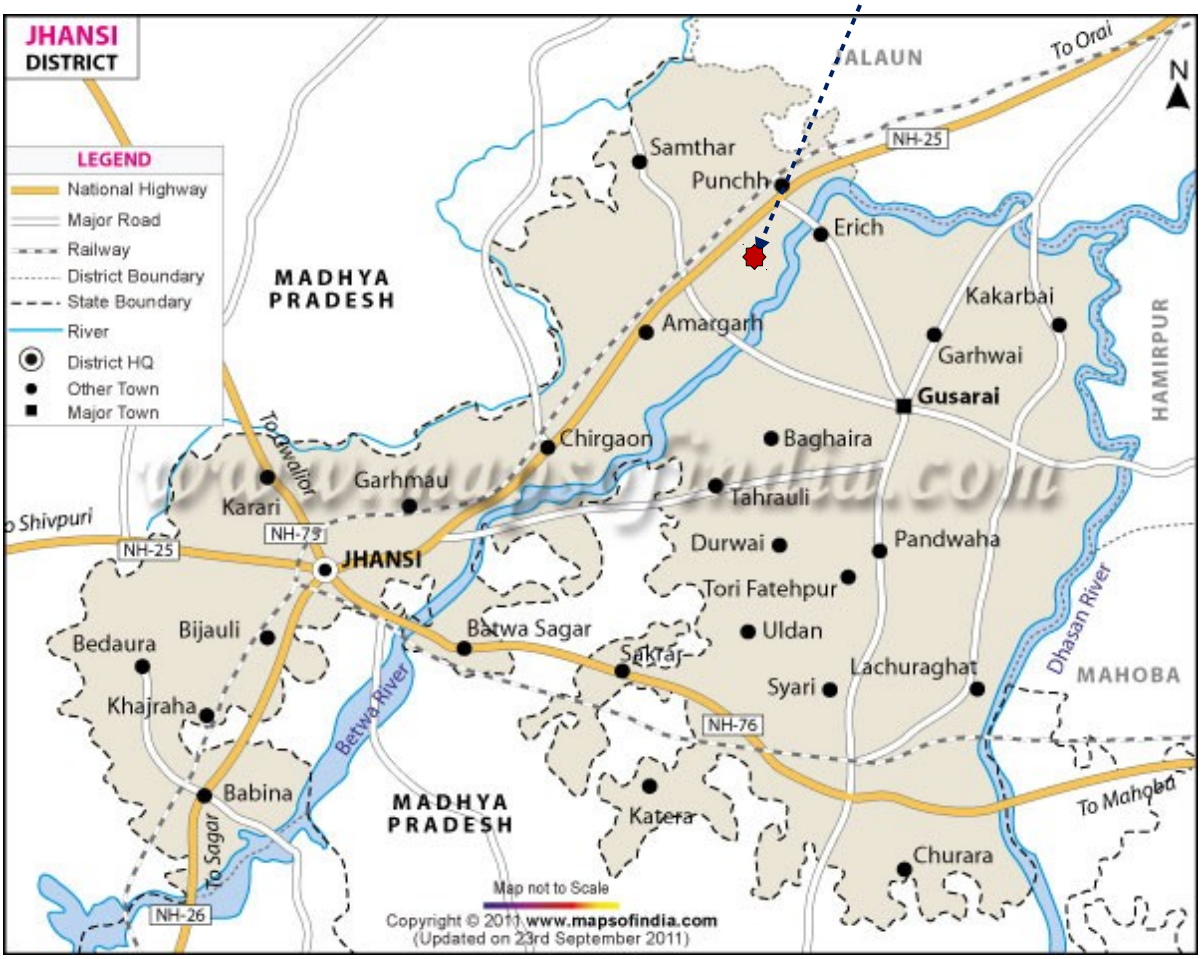
Emergency control room will function as control base.

**Transport Services:**
Transportation will be provided to deal with the situation.

**Functions Of Public Relations Group:**
To make a cordial relation with government officials and other social service organization and working groups. To liaise with representatives of the mine to ameliorate the situation of panic, tension, sentiments, grievances and misgivings created by any disaster. To ameliorate the injured, survivors and family members of affected persons by providing material, finance, moral support and establishing contact with relatives of victims

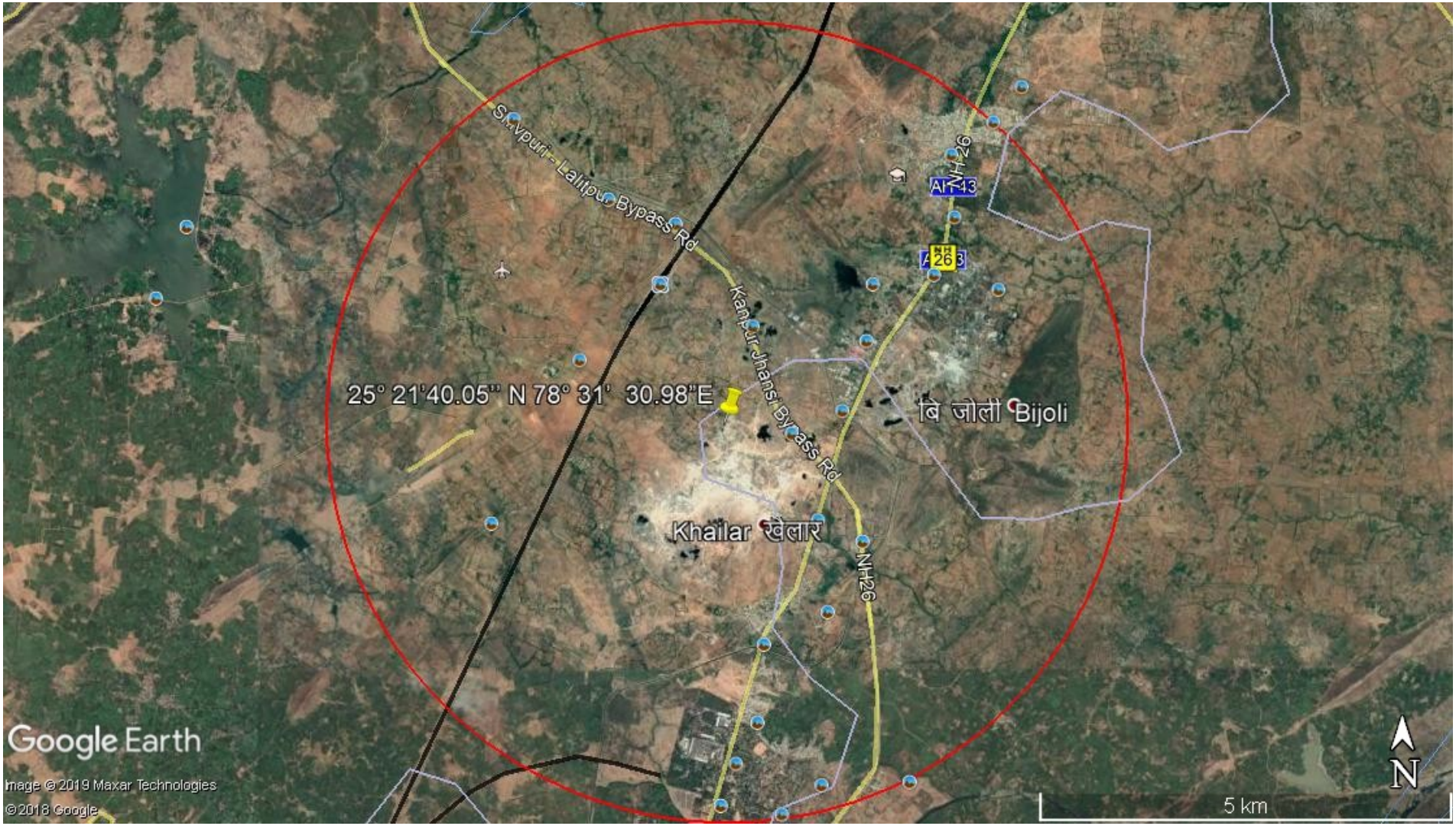
# Location Map of Lease Area




**Lease Area**

# *Google Map Showing 5 Km Radius from Lease Area*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Kanpur Jhansi Bypass Rd
NH26
NH26
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बिजोली Bijoli
Khailar खेलार
Google Earth
Image © 2019 Maxar Technologies
© 2018 Google
N
5 km