

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

**OA NO. 292 OF 2024**

**IN THE MATTER OF:**

**ABHISHEK SHUKLA**

**... APPLICANT**

**VERSUS**

**M/S SRI BAJRANG ROAD LINES**

**...RESPONDENT**

**NDOH : 02.08.2024**

**INDEX**

<b>S.NO.</b>	<b>PARTICULARS</b>	<b>PG NO.</b>
<b>1.</b>	Copy of Environment Impact Assessment Report (EIA) along with necessary Annexures, in compliance with the order dated 20.05.2024 passed by this Hon'ble Tribunal.	1-311

**RESPONDENT**



**S. C. LADIAND COMPANY**

Deeksha L. Kakar and Dhruv Kakar

ADVOCATES

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Enrol.No.D/1154/2008

Place: New Delhi

Dated: 22.07.2024

# ENVIRONMENTAL <sup>250</sup> IMPACT ASSESSMENT<sup>1</sup> & ENVIRONMENTAL MANAGEMENT PLAN REPORT

**File No. 6104**

**Proposed Girwan Granite (Khanda, Gitty, Boulder) Mining  
project**

**Mining Lease Area- 1.21 ha**

**Proposed Annual Production– 12,100 m<sup>3</sup>**

**At**

**Gata No. 1876 (Khand No.4), Village- Girwan ,  
Tehsil- Naraini, District- Banda, Uttar Pradesh**

## **EIA REPORT**

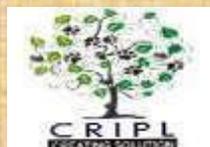
**PROJECT PROPONENT :**

**M/S Bajrang Road Lines**

**Proponent-Shri Suresh Pratap Singh**

**R/o Village & Post – Mau, 584, Katra Lalganj, Tehsil- Gauriganj,  
District- Amethi (U.P.)**

**Environment Consultant :**



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Chapter-1  
Introduction

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
District- Banda, Uttar Pradesh  
Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
Prop. M/s Bajrang Road Lines  
Partner-Shri Suresh Pratap Singh

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CHAPTER-I: INTRODUCTION

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# CHAPTER-I



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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## 1.0 PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) is a decision making tool, in the hands of the Authorities which brings forth the factual position about a project that enables them in arriving at an appropriate conclusion for the proposed projects, to retain them if environmentally sound, and reject if found having deleterious overall impact. EIA identifies the extent of the environmental, social and economic impacts of a project prior to decision-making. EIA systematically examines both beneficial and adverse impacts of the proposed project over and above the prevailing conditions of environmental parameters and ensure that these impacts are taken into account during the project designing stage itself and the values of the combined impacts are never allowed to exceed and remain within the statutory norms. This process has been envisioned and set in motion by the Ministry of Environment and Forests & CC for sustainable development and the final decision is arrived at only, after incorporating the salient features of the project and opinion of the public been sought in a widely advertised Public Hearing event under the chairmanship of the district authorities (not below the rank of ADM).

As per NGT Order Dated 13-09-2018 and MOEF & CC OM No L-11011/175/2018-IA-II(M) Dated 12-12-2018 the project comes under B1 Category since the area in 500m radius of the project boundary is more than 5 Ha. Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received from SEIAA-SEAC, U.P. Ref No. 831/Parya/SEAC/6104/2019 Dated 22.3.2021 attach as Annexure-I.

## 1.1 IDENTIFICATION OF PROJECT PROPONENT

The project is being proposed by M/s. Shri Bajrang Road Lines, Shri Suresh Pratap Singh, S/o. Shri Tej Pratap Singh R/o Village & Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, State-Uttar Pradesh. LOI has been granted in favor of M/s Bajrang Road Lines, Shri Suresh Pratap Singh. LOI



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document is attached at Annexure II. The EIA-EMP report has been prepared as per the TOR granted under the EIA Notification of September 14<sup>th</sup> 2006. In order to assess the impact on environment due to proposed mining, it is necessary to ascertain the present status of environment prevailing at the project site and identification and assessment of impacts on the environment of the proposed operations.

### 1.2 BRIEF DESCRIPTION OF PROJECT

The proposed project is to mine Granite (khanda, gitty, boulder) from the lease area. The LOI has been granted to M/s Bajrang Road Lines, Shri Suresh Pratap Singh, Vide **Letter No. 2338 / खनिज-30,बांदा** dated **06.10.2020**, for mine located at Gata No.1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, Uttar Pradesh. The expected project cost of the mining is Rs.59.13lakhs; Area- 1.21Ha.with production has been estimated 12100m<sup>3</sup>/year

The EIA-EMP report has been prepared as per the ToR granted under the EIA Notification. Further to assess the impact on environment due to proposed mining, it is necessary to ascertain present status of environment prevailing at the project site and proposed operation including identification and Assessment of impact on the environment & socio-economic condition of human beings.

### Location

The mine lease area is located at Gata No.1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, State-U.P. 10 km Buffer map is attached in Figure 1.2.

Sanctioned Mining Lease Area		
Pillar No.	Latitude	Longitude
<b>A</b>	25°18'24.06"N	80°23'0.21"E
<b>B</b>	25°18'25.48"N	80°23'5.07"E



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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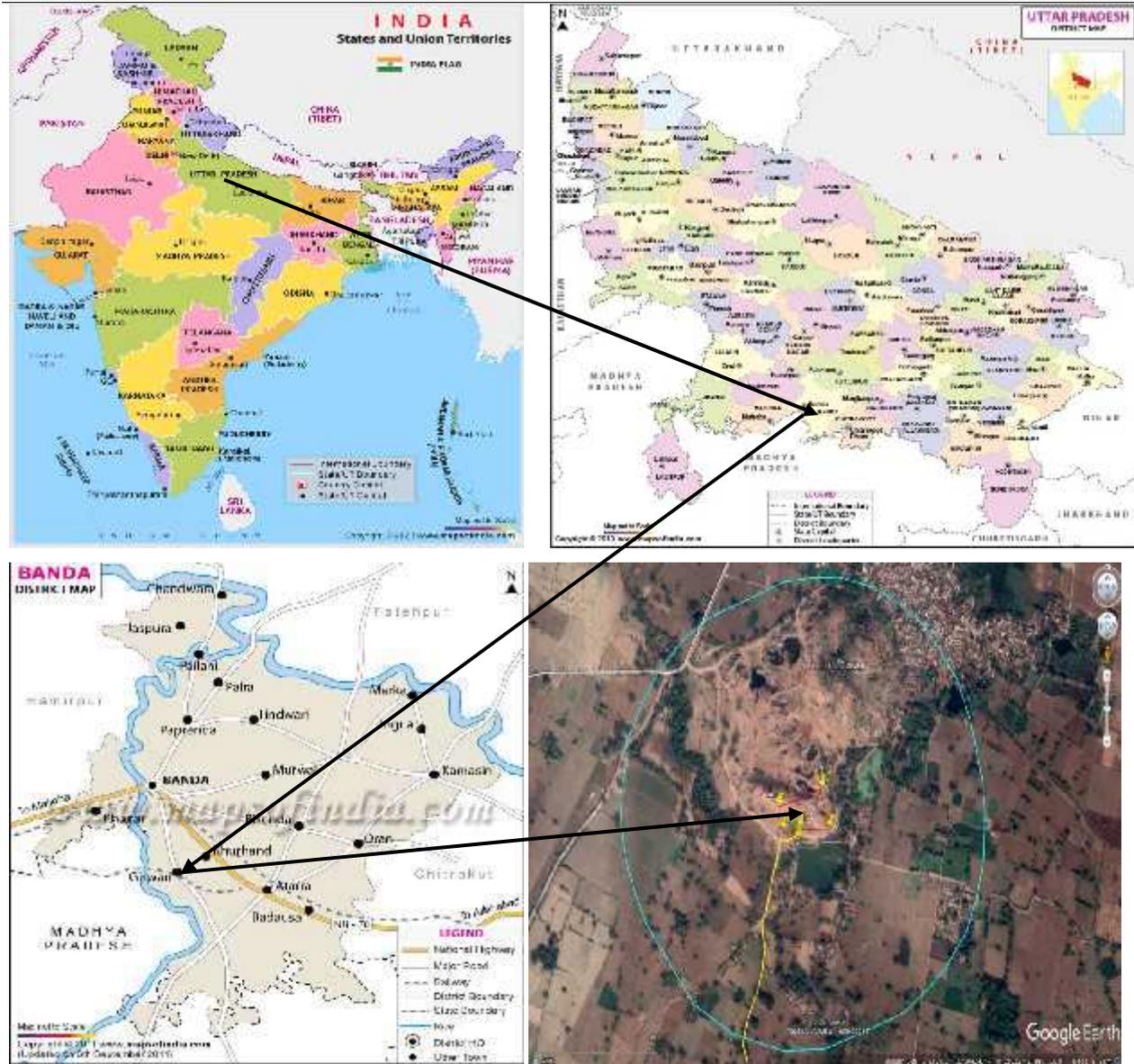
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<b>C</b>	25°18'22.37"N	80°23'6.04"E
<b>D</b>	25°18'22.37"N	80°23'2.64"E
<b>E</b>	25°18'21.52"N	80°23'2.35"E
<b>F</b>	25°18'22.24"N	80°23'0.67"E

<b>Nearest Settlements</b>	<ul style="list-style-type: none"> <li>Girwan (0.5km* towards NE)</li> <li>Patraha( 0.95km* towards NW)</li> </ul>
<b>Nearest Road</b>	<ul style="list-style-type: none"> <li>MDR 11 B (1.5 km* towards NE)</li> </ul>
<b>Nearest Airport</b>	Khajuraho Airport, approx 72.5km* towards SW direction.
<b>Nearest Railway Station</b>	Khurhand Railway Station, approx 11.5km* towards NE direction.
<b>Nearest National Park within 10 km</b>	None within the periphery of 10 km
<b>Water body</b>	Ken River approx. 5 km* towards SW
<b>Nearest School/ college/Hospital</b>	<ul style="list-style-type: none"> <li>Pt. J.N. Inter College, Girwan (1.45km towards NNE)</li> <li>Swami vivekanand Shiskshan Sansthan, Girwan (1.75km* towards NNE)</li> <li>New PHC Deorar (7km* towards SE)</li> </ul>
<b>Reserve/ Protected Forest</b>	<ul style="list-style-type: none"> <li>Bahadurpur Reserve forest (6.5 km towards WSW)</li> <li>Thakkura Protected Forest (8km towards 8km)</li> </ul>

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 Prop. M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

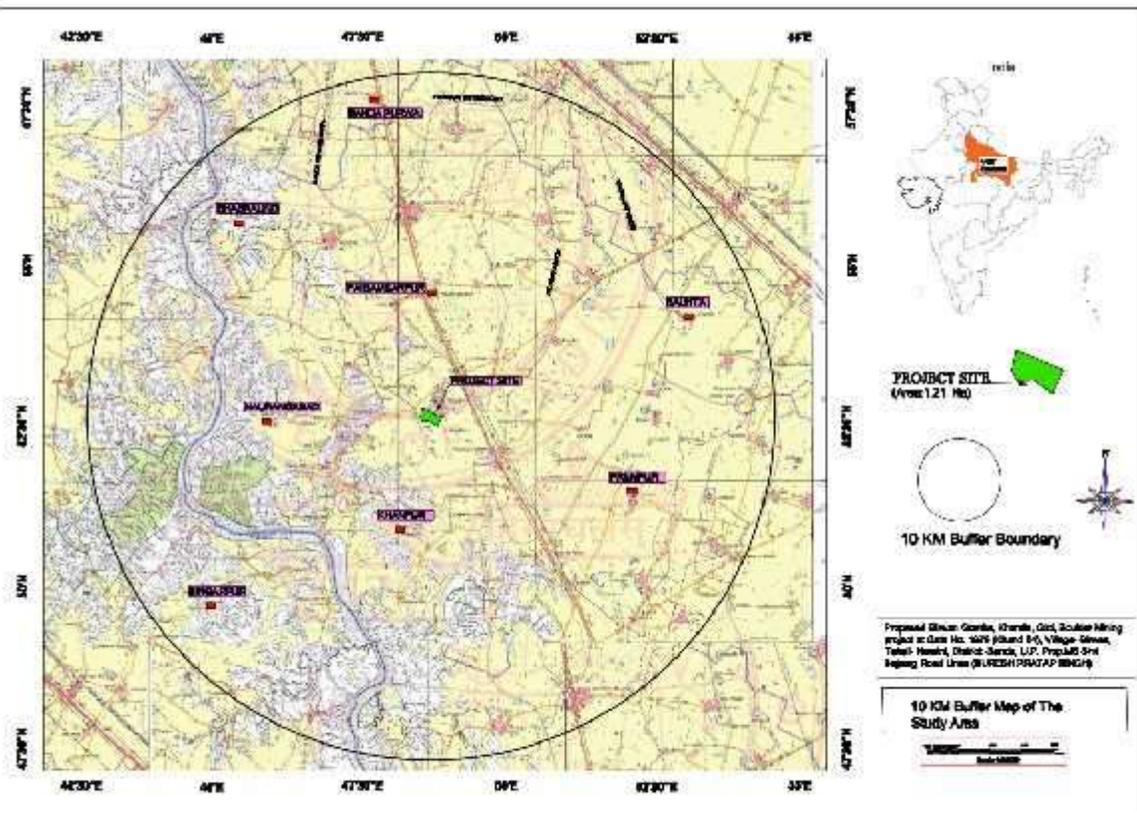
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**Figure 1.1: Location Map**

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
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Partner-Shri Suresh Pratap Singh

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**Figure 1.2: 10 Km Buffer Map**

**Table No. 1.1 Project Salient Features:**

On-line proposal No.	SIA/UP/MIN/59896/2021
File No. allotted by SEIAA, UP	6104
Name of Proponent	M/s Bajrang Road Lines Partner- Shri Suresh Pratap Singh
Full correspondence address of proponent and mobile No.	R/o Village and Post- Mau, 584, KatraLalganj, Tehsil- Gauriganj, District- Amethi, (U.P.)
	<b>Mobile No-</b>
	<b>Email-</b>
Name of Project	Girwan Granite, Khanda, Gitty, Boulder Mining project
Project location (Plot/Khasra/Gata No.)	Gata No. 1876 (Khand 04)
Name of River	Ken river

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Name of Village	Girwan		
Tehsil	Naraini		
District	Banda		
Name of Minor Mineral	Granite ,Khanda, Gitty, Boulder		
Sanctioned Lease Area (in Ha.)	1.21ha		
Max & Min mRL within lease area	Max- 152.10 mRL and Min- 142.20 mRL		
Pillar Coordinates (Verified by DMO)	<b>Sanctioned Mining Lease Area</b>		
	<b>Pillar No.</b>	<b>Latitude</b>	<b>Longitude</b>
	<b>A</b>	25°18'24.06"N	80°23'0.21"E
	<b>B</b>	25°18'25.48"N	80°23'5.07"E
	<b>C</b>	25°18'22.37"N	80°23'6.04"E
	<b>D</b>	25°18'22.37"N	80°23'2.64"E
	<b>E</b>	25°18'21.52"N	80°23'2.35"E
	<b>F</b>	25°18'22.24"N	80°23'0.67"E
Total Geological Reserves	5,28,282m <sup>3</sup>		
Total Mineable Reserves	1,48,500m <sup>3</sup>		
Total Proposed Production	60,500 cum		
Proposed Production/year	12,100 cum		
Sanctioned Period of Mine lease	Maximum 10 years (Mining plan prepared for 5 years)		
Production of mine/day	46.53		
Method of Mining	Open Cast Semi-mechanized Method		
No. of working days	260days		
Working hours/day	8hrs		
No. of workers	30		
No. of vehicles movement/day	7		
Type of Land	Government waste land		
Ultimate Depth of Mining	24m		
Nearest metalled road from site	1.4 km		
Water Requirement	PURPOSE	REQUIREMENT (KLD)	
	Drinking	0.30	
	Suppression of dust	7.18	
	Plantation	0.20	
	Others (if any)	0.30	
	Total	7.98	
Name of QCI Accredited Consultant with QCI No and	Cognizance Research India Pvt Ltd. 1922, validity= 03-02-2022		



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period of validity.	
Any litigation pending against the project or land in any court	No
Details of 500 m Cluster Map & certificate issued by Mining Officer	Yes, certified
Details of Lease Area in approved DSR	Yes, given in the DSR
Proposed EMP cost	Rs 3,68,000 Recurring Cost Rs 2,40,000/- Capital Cost including CER
Length and breadth of Haul Road	Length: 0.59 km, width: 6 m
No. of Trees to be Planted	100 plants

### Project's importance to the country and the region

The project when in operation will provide employment to the people residing in vicinity. It has been estimated that 260 days will be generated annually and about 30 people will be benefited directly and indirectly by the project.

The project involves extraction of Granite (Khanda/Gitti/Boulder) used for various constructional activities. It is expected that the proposed mining project would improve the supply of construction material making a positive impact on the infrastructural projects like construction of roads, buildings, bridges etc in the state.

### 1.3 REGULATORY COMPLIANCES & APPLICABLE LAWS/REGULATIONS

- There is no legal case against the project and project proponent.
- There is no national park / Sanctuary notified under the Wildlife Protection Act in the study area.

### 1.4 SCOPE OF THE STUDY

The SEIAA-SEAC-Uttar Pradesh prescribed the TOR.

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<b>TOR Ref.</b>	<b>TOR Points for the preparation of EIA</b>	<b>TOR Reply</b>
1.	All pages of technical documents /EIA/EMP etc. should be signed by the consultant and project proponent both.	All pages of technical documents/EIA/EMP etc. are signed by the consultants and project proponent
2.	Copy of all the analysis reports signed by analyst approved by NABL or MoEF&CC shall be annexed with the EIA report and original analysis reports should be presented at the time of presentation.	Copy of all the analysis reports signed by analyst approved by NABL lab is complied.
3.	MOU signed between the project proponent and the consultant should be submitted.	MOU signed between the project proponent and the consultants is being submitted with EIA report as annexure IX
4.	The project proponent should obtain the forest clearance and permission of Central and State Government as per law under the provisions of Forest (conservation) Act, 1980 and submit along with EIA.	NO Forests lie in periphery of project site. Detail given in chapter-1
5.	The lease area its address and production per annum should match with as mentioned in DSR and LOI. In case there are any difference clarification/amendments letter from competent authority shall be submitted along with EIA. EIA and public hearing shall be conducted as per the lease area its address and production per annum mentioned in DSR and LOI.	The lease area its address and Production is same in LOI & DSR.  Public hearing is also conducted for the same area and production is given in LOI & DSR.

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<b>6.</b>	Public hearing shall be conducted as per EIA notification,2006 (as amended)	Public hearing has been conducted on Date 11.8.2021 as per EIA notification 2006.
<b>7.</b>	SEIAA Opined that the project proponent shall submit permission of CGWA or proposal for alternative source of fresh water	There will be no water extraction. Daily Water Demand of 7.98KLD will be fulfilled by Private water tanker.
<b>8.</b>	Revised form-1 in terms of geo-coordinates C& D	Form-1 has been revised in terms of Geo- Coordinates.
<b>9.</b>	Verified Geo-coordinates	Khasra Map has been Verified attached as Annexure-VI
<b>10.</b>	Year wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force w.r.t. the highest production achieved prior to 1994.	Not applicable as it's a fresh lease.
<b>11.</b>	A copy of the document in supports of the fact that the proponent is the rightful lessee of the mine should be given.	The copy of LOI is attached as Annexure- II.

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12.	All documents including approved mine plan, EIA and public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its managements, mining technologies etc. and should be in the name of the lessee.	The mine lease area, production levels, waste generation and its managements, mining technologies is compatible in all documents i.e Mine Plan, EIA & Public hearing proceedings.  LOI Attached as Annexure-II,  Mine Plan as Annexure-III&  Public Hearing Minutes as Annexure-XI
13.	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery /toposheet, topographic sheet, geomorphology and geology of the area should clearly show the land use and other ecological features of the study area (buffer zone).	Toposheet map with all corner coordinates of the mine lease area given in Chapter-1 &Chapter-3.
14.	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating map of the area, geomorphology and land forms of the area, existing minerals history of the area, important water bodies, streams and rivers and soil characteristics.	Details given in Chapter-3

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15.	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	The land proposed for mining conforms the Land Policy of state & State has itself allotted the lease in E- Tender.(Details given in Chapter-1)
16.	It should be clearly stated whether the proponent Company has a well laid down Environment policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operation process/procedures to bring into focus any infringement/devotion/violation of the environmental or forest norms/conditions? The hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of responding of non-compliances /violations of environmental norms to the Boards of Directors of the Company and /or shareholders or stakeholders at large, may also is detailed in the EIA Reports.	Environment policy approved by its Board of Directors attached as Annexure-X.
17.	Issues relating to Mine safety, including subsidence study in case of underground mining and slope study in the case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	Details given in chapter-2 &7.

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<p><b>18.</b></p>	<p>The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine /lease period.</p>	<p>The 10 km zone from periphery of the lease has been considered as the study area. The Buffer map of the study area is attached with report in chapter-1</p> <p>All the details in the EIA report are for the life of the mine period.</p> <p>The details of mining &amp; production have been given in the report.</p>
<p><b>19.</b></p>	<p>Land use of the study area delineating forest area, agricultural lands, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any of change of land use should be given</p>	<p>Detail given in chapter-3</p>
<p><b>20.</b></p>	<p>Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&amp;R issues, if any, should be given.</p>	<p>Details given in Chapter-2,3 &amp;4.</p>

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21.	A Certificate from the competent authority in the State Forest Departments should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forest, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assists the Expert Appraised Committees.	No Forest Area involved within Project site. Detail given in chapter-1 &3
22.	Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	No Forest Area involved within Project site. Detail given in chapter-1 &3
23.	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Detail given in Chapter-3.
24.	The vegetation in the RF/PF areas in the study area, with necessary details, should be indicated.	Detail given in Chapter-3.

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25.	A study shall be got done ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measure required, should be worked out with cost implications and submitted.	Detail given in Chapter-3.
26.	Location of National parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden, Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	NO National parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves (existing as well as proposed) Within 10 km periphery of the mine lease.

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27.	A detailed biological study of the study area [core zone and duffer zone (10 Km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled –I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State forest and Wildlife Departments and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	Detail given in Chapter-3.
28.	Proximity of Areas declared as “Critically Polluted” or the project areas likely to come under the “Aravali Range”, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	Not Applicable.

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<p><b>29.</b></p>	<p>Similarly, for coastal projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL,HTL,CRZ area, location of the mine lease w.r.t. CRZ, coastal features such as mangroves, if any, should be furnished (Note: The Mining Projects falling under CRZ would be need to obtain approval of the concerned Coastal Zone Management Authority).</p>	<p>Not Applicable.</p>
<p><b>30.</b></p>	<p>R&amp;R Plan/compensation details for the project Affected People (PAP) should be furnished. While preparing the R&amp;R plan, the relevant State/National Rehabilitation &amp; Resettlement policy should be kept in view. In respect of SCs/STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the</p>	<p>Not Applicable.</p>

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<p><b>31.</b></p>	<p>One Season (non-monsoon)[i.e. March-May (Summer Season); October-December (Post monsoon seasons); December –February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so complied presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.</p>	<p>Detail given in Chapter-3.</p>
<p><b>32.</b></p>	<p>Air quality modeling should be carried out for preparation of impact of the project on the air quality of the area. it should also take into account the impact of movement of vehicles for transportation of minerals. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on the location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.</p>	<p>Detail given in chapter-4</p>

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33.	The water requirement for the project, its availability and sources should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.	The water requirement for the project is 7.98KLD for drinking, dust suppression and green belt development. This water supplied from nearby area. Details given in Chapter-2
34.	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.	Water requirement will be fulfilled by private water tanker. So, no clearance is required.  The project do not consume any process water except for drinking, dust suppression & plantation. Plantation is proposed, which will increase the water holding capacity & help in recharging of ground water.
35.	Description of water conservation measures proposed to be adopted in the project should be given. Details of rainwater harvesting proposed in the project, if any, should be provided.	Detail given in chapter-4
36.	Impact of the project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Detail given in chapter-4

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<p><b>37.</b></p>	<p>Based on actual monitored data, it may clearly be shown whether working will intersect groundwater.</p> <p>Necessary data and documentation in this regard may be provided. In case the working will interest groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Centre Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.</p>	<p>Mining will be up to 24 m below ground level or above the ground water table whichever comes first. This will not intersect the ground water table.</p> <p>So no NOC required from Central Ground Water Authority.</p>
<p><b>38.</b></p>	<p>Details of any stream, seasonal or otherwise, passing through the lease area and modification/diversion proposed, if any and the impact of the same on the hydrology should be brought out.</p>	<p>Not Applicable.</p>
<p><b>39.</b></p>	<p>Information on site elevation, working depth, groundwater table etc, Should be provided both in AMSL and bgl. A schematics diagram may also be provided for the same.</p>	<p>Detail given in chapter-2 &amp; 3.</p> <p>Mine plan attached as Annexure-III</p>

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<p><b>40.</b></p>	<p>A time bound progressive Greenbelt Development plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind; the same will have to be executed up front on commencement of the project. Phase wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.</p>	<p>Detail given in chapter-8,9</p>
<p><b>41.</b></p>	<p>Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as state government) should be covered. Project proponent shall conduct impact of Transportation study as per Indian Road Congress Guidelines.</p>	<p>Detail given in chapter-4</p>

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42.	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.	Detail given in chapter-2
43.	Conceptual post mining land use and reclamation and restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA.	Detail given in chapter-2
44.	Occupational Health impacts of the project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Detail given in chapter-7
45.	Public health implications of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	Detail given in chapter-8
46.	Measures of socio economic significance and influence to the local community proposed to be provided by the project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Detail given in chapter-8

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47.	Detailed Environment Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed project.	Detail given in chapter-9
48.	Public hearing points raised and commitment of the project proponent on the same along with the time bound action plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP report of the project.	Detail given in chapter-7
49.	Details of litigation pending against the project, if any, with direction/order passed by any court of law against the project should be given.	No Litigation Pending.
50.	The cost of the project (capital cost & recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.	Detail given in chapter-9 &10
51.	A Disaster Management Plan shall be prepared and included in the EIA/EMP report.	Detail given in chapter-7
52.	Benefits of the project if the project is implemented should be spelt out. The benefits of the project shall clearly indicate environmental, social, economic, employment potential, etc.	Detail given in chapter-8 & 9.
53.	Besides the above, the below mentioned general points are also to be followed:-	

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<b>a.</b>	Executive summary of the EIA/EMP report	Complied
<b>b.</b>	All document to be properly referenced with index and continuous page numbering	Complied
<b>c.</b>	Where data are presented in the report especially in table, the period in which the data were collected and the sources should be indicated.	Complied
<b>d.</b>	Project Proponent shall enclose all the analysis /testing reports of water, air, soil, noise, etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.	Complied
<b>e.</b>	Where the documents provided are in a language other than English, an English translation should be available during appraisal of the project.	Complied
<b>f.</b>	The Questionnaire for environmental appraisal of mining projects as devised earlier by the ministry shall also be filled and submitted.	Complied
<b>g.</b>	While preparing the EIA report the instruction for the proponent & instruction for the consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA-II (I) dated 4 <sup>th</sup> August 2009, which are available on the website of the ministry, should be followed.	Complied With EIA report

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<p><b>h.</b></p>	<p>Changes, if any made in the basic scope and project parameter (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&amp;CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.</p>	<p>No changes done in report</p>
<p><b>i</b></p>	<p>As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.</p>	<p>This is new case for Mining. No certified compliance report is required.</p>

Chapter-2  
Project Description

# CHAPTER-II



**CHAPTER-II**  
**PROJECT DESCRIPTION**  
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## 2.1 TYPE OF PROJECT

The proposed project is an opencast semi-mechanized mining project, where Granite, Khanda, Gitti & Boulder will be extracted.

## 2.2 NEED FOR THE PROJECT

For achieving a huge infrastructure as envisaged by Government of India particularly in road and housing sector requires basic building materials. Granite, Khanda, Gitti & Boulder are primary building material required for the purpose. The mining activities of this kind are the backbone of all construction and infrastructure projects. Raw materials for construction are provided by the mining of this nature.

## 2.3 LOCATION DETAILS

The mining area is located at Gata No.1876, Khand No.-04, Village- Girwan, Tehsil- Naraini, District-Banda, State-U.P.

**TABLE 2.1: SALIENT FEATURES OF PROJECT**

On-line proposal No.	SIA/UP/MIN/59896/2021
File No. allotted by SEIAA, UP	6104
Name of Proponent	M/s Bajrang Road Lines Partner- Shri Suresh Pratap Singh
Full correspondence address of proponent and mobile No.	R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, (U.P.)
	<b>Mobile No-</b>
	<b>Email-</b>
Name of Project	Girwan Granite, Khanda, Gitty, Boulder Mining project
Project location (Plot/Khasra/Gata No.)	Gata No. 1876 (Khand 04)
Name of River	Ken river
Name of Village	Girwan
Tehsil	Naraini
District	Banda
Name of Minor Mineral	Granite ,Khanda, Gitty, Boulder

Sanctioned Lease Area (in Ha.)	1.21ha	
Max & Min mRL within lease area	Max- 152.10 mRL and Min- 142.20 mRL	
Pillar Coordinates (Verified by DMO)	<b>Sanctioned Mining Lease Area</b>	
	<b>Pillar No.</b>	<b>Latitude</b>
	<b>A</b>	25°18'24.06"N
	<b>B</b>	25°18'25.48"N
	<b>C</b>	25°18'22.37"N
	<b>D</b>	25°18'22.37"N
	<b>E</b>	25°18'21.52"N
	<b>F</b>	25°18'22.24"N
Total Geological Reserves	5,28,282m <sup>3</sup>	
Total Mineable Reserves	1,48,500m <sup>3</sup>	
Total Proposed Production	60,500 cum	
Proposed Production/year	12,100 cum	
Sanctioned Period of Mine lease	Maximum 10 years (Mining plan prepared for 5 years)	
Production of mine/day	46.53	
Method of Mining	Open Cast Semi-mechanized Method	
No. of working days	260days	
Working hours/day	8hrs	
No. of workers	30	
No. of vehicles movement/day	7	
Type of Land	Government waste land	
Ultimate Depth of Mining	24m	
Nearest metalled road from site	1.5 km	
Water Requirement	PURPOSE	REQUIREMENT (KLD)
	Drinking	0.30
	Suppression of dust	7.18
	Plantation	0.20
	Others (if any)	0.30
	Total	7.98
Name of QCI Accredited Consultant with QCI No and period of validity.	Cognizance Research India Pvt. Ltd. 1922, validity= 03-02-2022	
Any litigation pending against the project or land in any court	No	
Details of 500 m Cluster Map & certificate issued by Mining Officer	Yes, certified	
Details of Lease Area in approved DSR	Yes, given in the DSR	
Proposed EMP cost	Rs 3,68,000 Recurring Cost Rs 2,40,000/- Capital Cost including CER	



Proposed Girwan Granite, Khand, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan, Tehsil- Naraini  
 District- Banda, Uttar Pradesh  
 Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
 Prop. M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP  
 CHAPTER-II: PROJECT DESCRIPTION

Length and breadth of Haul Road	Length: 0.59 km, width: 6 m
No. of Trees to be Planted	100 plants

## 2.4 LEASE HOLD AREA

The entire lease hold area of 1.21 Ha lies at Gata No. 1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, State-U.P. The breakup of the existing land use for ancillary feature around the mining area is given below

**Table no 2.2 –Area Details**

Sr. No.	Land use	Agriculture land (ha)	Forest Land (ha)	Waste land (ha)	Grazing Land (ha)
1	Mining pits Quarry	-	-	1.1353	-
2	Approach Road	-	-	0.06	-
3	Dumps	-	-	-	-
4	Office, Rest Shelter etc.	-	-	0.01	-
5	Balance undisturbed land	-	-	0.0047	-
	<b>Total</b>	-	-	<b>1.21</b>	-





**Fig 2.1- Pillar Coordinate Map**

### **2.5 TOPOGRAPHY:**

Briefly describe the topography & general geology & local mine geology of the mineral deposit including drainage pattern.

#### **TOPOGRAPHY:**

District Banda is located in geographical extends between 24<sup>o</sup> 53' to 25<sup>o</sup> 55' N latitude and 80<sup>o</sup> 07' to 81<sup>o</sup> 34' E longitudes. The total geographic area of the district is about 4460 Sq. Km. The district forms part of the northern fringe of the peninsular India coming in contact with the Gangetic alluvium. North side of this district is bounded by Fatehpur district, west by Mahoba and Hamirpur, east by Chitrakoot and south side bounded by State of Madhya Pradesh. District headquarter is at Banda having 5 Tehsils and 8 Blocks. As per the 2011 census the district has population of 1,799,410 of which male and Female were 965,876

and 833,534 respectively. Literacy rate of the district is 54.2%. Sand is the main mineral available in the banks of the river Yamuna, Ken, Baghain and Ranj. Sand is available which is used in construction and few minor stones are also found in the Rocky Mountains which are used by the public work Departments for road construction in and nearby district. The district largely consists of irregular uplands with outcrops of rocks intermingling mostly with lowlands, frequently under water during rainy season. The Baghain River traverses the district from southwest to north-east and Ranj is a prominent tributary of Baghain. The tract lying to the right of the river is intersected by numerous smaller river and rivulets, but to its left are a flat expanse, most part of which is made up of Mar and Kabar soil, eroded and converted into ravines along the banks of the rivers Ken and the Yamuna.

The general slope of applied area is from North to South direction. No seasonal & perennial drainage exists within the applied area. The highest and lowest point in the leasehold is 152.10 mRL and 142.20 mRL.

**Source: Approved Mining Plan**

**2.6 GEOLOGY:**

Geologically the area comprises Precambrian Bundelkhand granites unconfirmably overlain by Vindhyan are quaternary alluvium. The main and major drainage of the district are Yamuna, Ken and Baghain which are part of Yamuna river system. Physiographically the area can be divided into three physiographic units-

- (1) Alluvial Plain
- (2) Marginal Alluvial
- (3) High Land (Hard rock) area.

The Bundelkhand Granite Gitty Complex occupies an area of 26,000 sq. of which 11,000 sq. km. lies in Lalitpur, Banda, Hamirpur and Banda Distt. of U. P. The granite complex in this region is essentially made of grey and pink granite rocks of



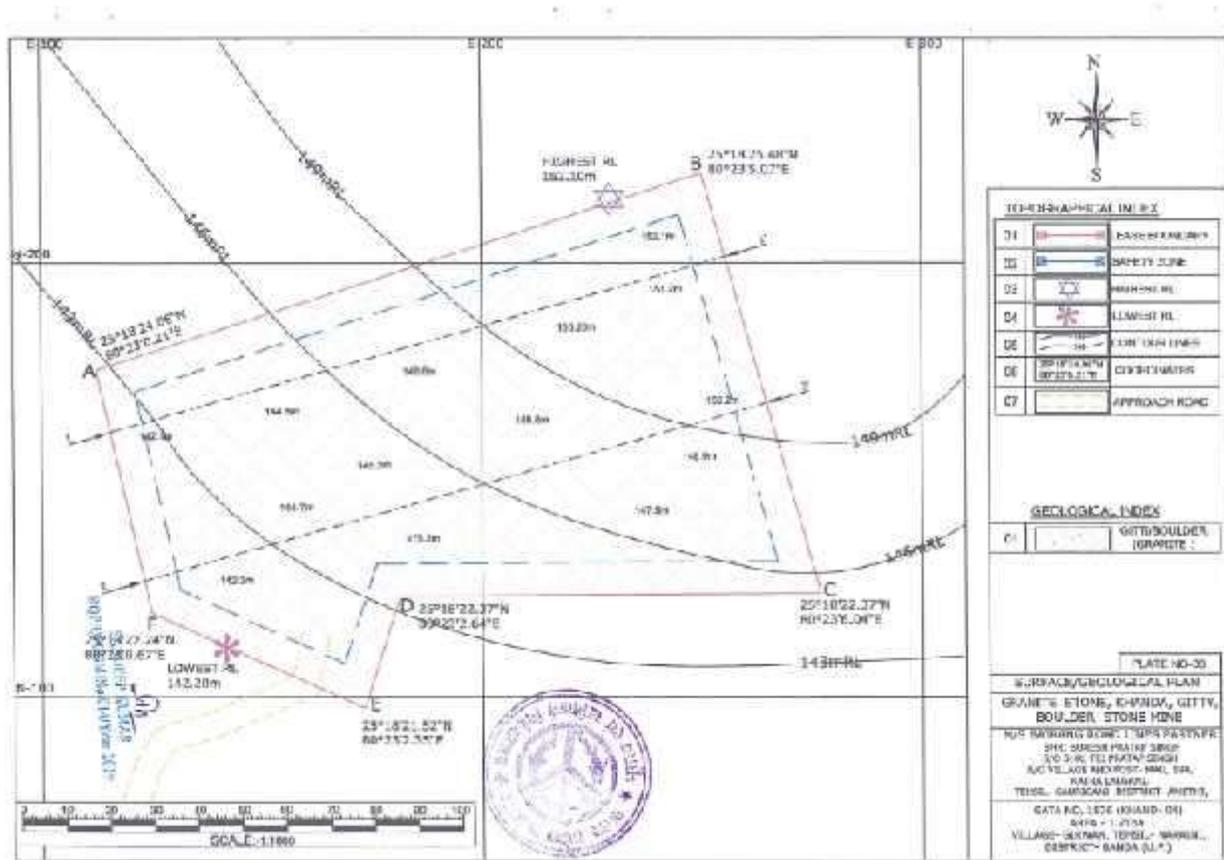
granodiorite-adamellite composition with minor occurrences of hornblende diorite, gabbro, grey gneisses. These rocks are intruded by a number of quartz reefs mainly trending in NE-SW and basic dykes in NW-SE directions. The Bundelkhand massif is overlain by rocks of Bijawar and Vindhyan group respectively. The stratigraphic order of superposition is as below:



**Source: Approved Mining Plan**

#### **Geology of lease area:**

The area is dominated by medium to fine grained, granite boulders. It usually occurs as boulder concentrations dark grey in colors with porphyritic texture. Vein lets of quartz are also seen with the deposit. The upper layer shows signs of weathering.



**Fig 2.2- Surface/Geological plan**

**Geomorphology**

The district is characterized by alluvial, hard rock as well as marginal alluvium. The district can be broadly classified into three physiographic units. (i) The alluvial Plain, (ii) Marginal Alluvial, (iii) High Land Area.

**Soil**

In Banda district loose sediments as well as black cotton soil is found. Black cotton soil is prominent in the central part. Four major type of soil a) Rakar, b) Mar, c) Kabar and d) Padua are dominant in the district.

Source: [http://cgwb.gov.in/District\\_Profile/UP/banda.pdf](http://cgwb.gov.in/District_Profile/UP/banda.pdf)

**RAINFALL & CLIMATE**

The average annual rainfall is 902.00 mm. The climate is typical subtropical penetrated by long and intense summers. About 80% of the annual rainfall is



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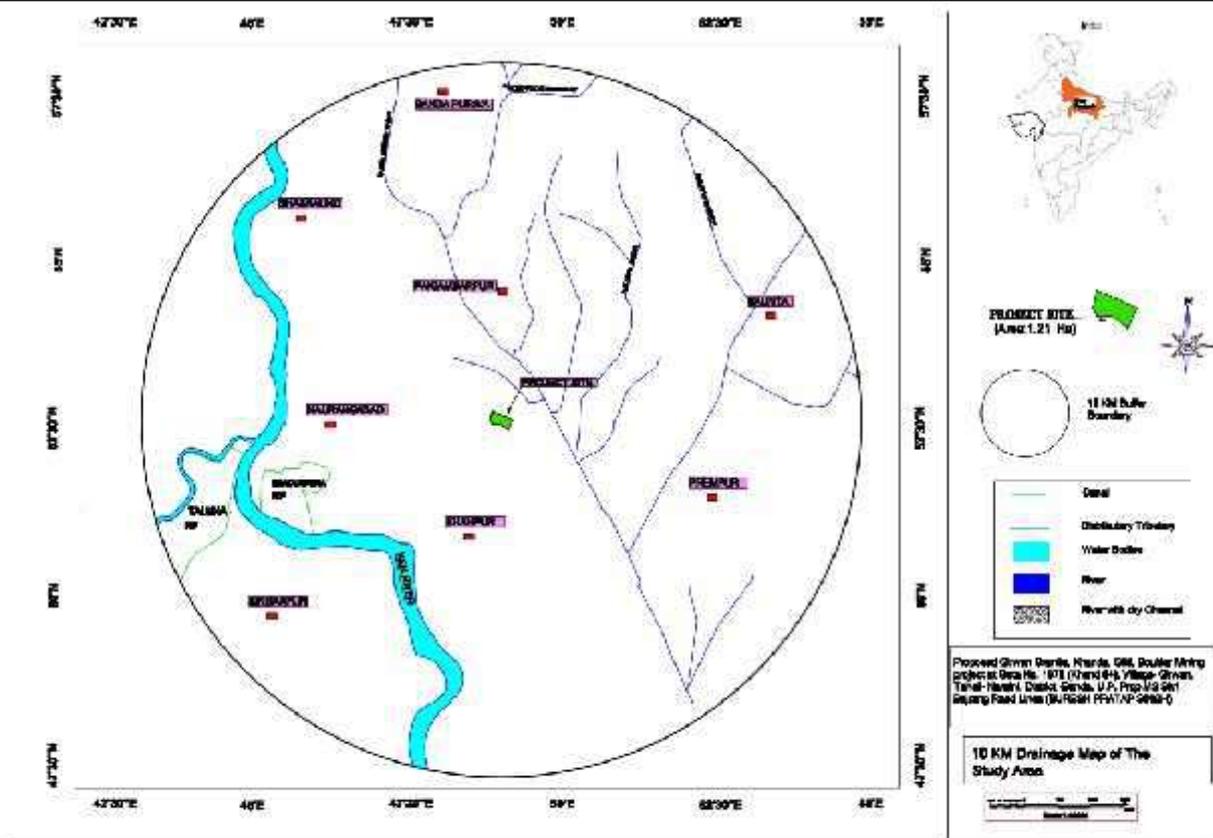
received from south-west monsoon. May is the hottest month with mercury shooting up to 47.0°C. With the advance of monsoon by mid-June, temperature starts decreasing. January is usually the coldest month with temperature going up to 5.8°C. The relative humidity is highest in August about 85% and lowest in April.

**Source: [http://cgwb.gov.in/District\\_Profile/UP/Banda.pdf](http://cgwb.gov.in/District_Profile/UP/Banda.pdf)**

### **Surface drainage pattern**

Banda district is drained by Yamuna, Ken, Baghain and Ranj rivers. River Yamuna bifurcates the district Banda from Fatehpur in north and flows from west to east in the entire district. River Ken is the tributary of River Yamuna at Chilla Ghat in district Banda. River Ken meets Yamuna at Chilla. River Baghain also bifurcates Banda from Chitrakoot in southeast. Banda reported 153, 804 hectares under the category of Net Irrigated Area whereas 1, 69,816 hectares under the category of gross irrigated area. The district Banda reported 34.48 percent under Net Irrigated Area and 38 percent under the category of Gross Irrigated area. The total length of canal reputed 1193 Km. Its catchment area under the canal is 11.35%. The Total geological area of the district is 4460 Km<sup>2</sup>. The Yamuna, Ken and several tributaries of river Yamuna are flowing in the Banda district. Average rain the district approximate 902.00 MM. general Climate of the district is healthy and peasant. The net irrigated area is 153804 ha and the net area shown is 336000 ha, which shows that 45.77% area is irrigated by ground water and the surface water while the rest depends on rainfall. The surface drainage pattern map is given in **Fig. 2.3**





**Fig. 2.3-Surface Drainage Map**

**DETAILS OF EXPLORATION:**

**a) Carried out in the area:**

The proposed sanction mining lease area for the excavation of the mineral is for 10 years. The area is virgin land and the mine plan is prepared for the first 5 years tenure. The mining activities will be carried out after the grant EC. Hence, at present there is no pit in the mining lease area.

**b) Proposed to be carried out:**

The mining activities will be started after the grant of EC for which the mine plan is prepared and will be submitted for EC after the approval.



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## 2.7 RESERVE ESTIMATION

The reserve estimation has been done by cross-sectional method. Two cross-sections at an influence of 42 m & 36 m are drawn. The surface areas of cross-sections are multiplied by the cross-sectional strike influence to get the volume.

### Basis of estimation of reserve:

- ) The bulk density of Granite (Khanda, Gitti & Boulder) has been taken 2.8 in view of the past mining experience.
- ) The geological reserves have been computed through cross sectional area method.

### GEOLOGICAL RESERVES:

The geological reserves estimated by cross-sectional method can be categorized into four classes.

#### a) Proved Reserves( UNFC CODE- 111):

There is no exposed rock (outcrop) in the form of Building stone, Khanda, Gitti, Boulder therefore there is no outcrop to be considered as under proved category 111 along with the measured / estimated depth of 24 m below the surface level. Thus, in the entire category (111) is estimated accordingly up to a block of 34 m thickness

#### b) Probable Reserve (UNFC CODE- 122):

A 10 m. thickness below the proved reserve is considered as Probable mineral reserves.

#### c) Feasibility in mineral resources (UNFC CODE- 341):

The mineral block with statutory barrier with in proved zone has been not considered as 341.

#### d) Pre-Feasibility in mineral resources (UNFC CODE- 222):

Mineral blocked with in statutory barrier in probable zone has been not



considered as 222.

**Table 2.3- Summary of reserves is as below:**

**MEASURED MINERAL RESOURCES (331)**

Section line	Area ( m <sup>2</sup> ) (111)	Area (m <sup>2</sup> ) (21)	Strike In- fluence (m)	Volume (cum)		In situ Reserves (Tonnes)		Total Quantities(m <sup>3</sup> ) (1.5 Swell factor)	
				111	211	111	211	111	211
<b>1-1'</b>	2694	650	42	113148	27300	316814.4	76440	169722	40950
<b>2-2'</b>	2442	592	36	87912	21312	246153.6	59673.6	131868	31968
<b>Total</b>				201060	48612	562968	136113.6	301590	72918

**INDICATED MINERAL RESOURCES (332)**

Section Line	Area m <sup>2</sup> (122)	Area m <sup>2</sup> (222)	Strike In- fluence (m)	Volume (cum)		In situ Reserves (Tonnes)		Quantities(m <sup>3</sup> ) (1.5 Swell Factor)	
				122	222	122	222	122	222
<b>1-1'</b>	706	600	42	29652	25200	83025.6	70560	44478	37800
<b>2-2'</b>	744	580	36	26784	20880	74995.2	58464	40176	31320



<b>Total</b>	56436	46080	158020.8	129024	84654	69120
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**Category wise updated reserves with grade are as follows:**

Category	UNFC Code	Quantity in m <sup>3</sup>	Grade
<b>Total Mineral Reserve</b>			
Proved Mineral Reserve	111	301590	Granite, Khanda, Gitty, Boulder
Probable mineral Reserve	122	84654	-do-
<b>Total Remaining Resources</b>			
Feasibility Mineral Resource	341	72918	-do-
Prefeasibility Mineral Resource	222	69120	-do-
Inferred Mineral Resource	333	Nil	
<b>Total Reserves + Resources</b>		<b>5,28,282</b>	-do-

**MINEABLE RESERVE:**

Mineable reserves have been taken considering a bench of height 6 m and width 6 m has been drawn in geological sections to calculate the mineable reserves. The area of each bench level has been calculated & multiplied by its average bench height to get the volume. Density of Granite, Khanda, Gitty & Boulder has been taken 2.8 for tonnage factor.



<b>Slice/Bench Level in (mRL)</b>	<b>Volume(cum)</b>	<b>Reserves (Tonnes)</b>
146	32,400	90720
Road cutting (140-134)	1,752	4905.6
140-134	58,638	164186.4
Road cutting (134-128)	1,752	4905.6
134-128	31,908	89342.4
Road cutting (128-122)	1,752	4905.6
128-122	20,298	56834.4
<b>Total</b>	<b>1,48,500</b>	<b>4,15,800</b>



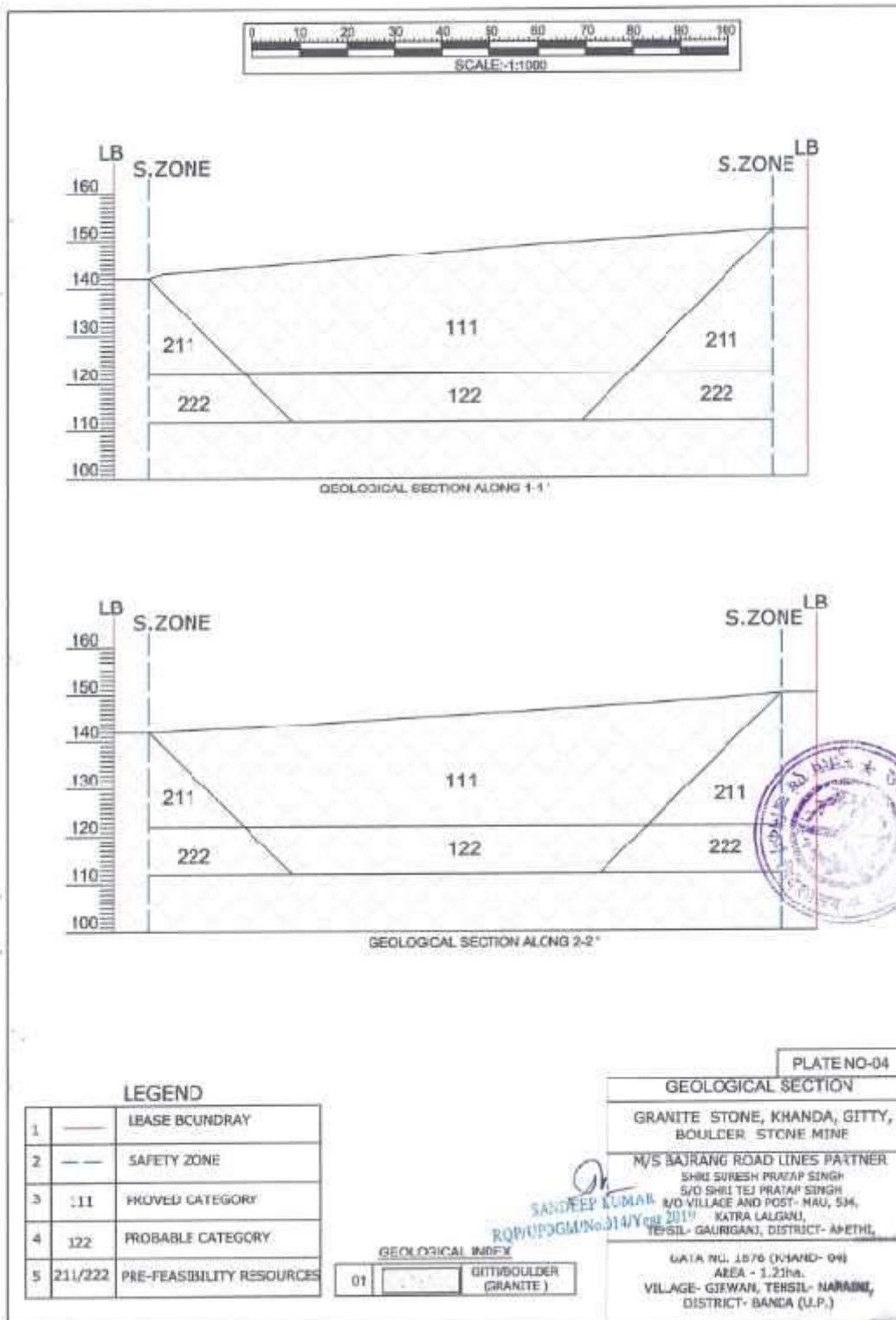


Fig 2.4- Geological Section

**2.8 PROPOSED METHOD OF MINING**

**(A) Briefly describe the existing/proposed method for developing/working the deposit with all design parameters:**

**I. Existing Method of mining:**

It will be an opencast manual mine with adoption of drilling & blasting. Drilling is to be carried out with 32 mm diameter jack hammer drill rids & blasting material is to be used as an explosive. The blasted material broken by manually up to sized 2 ft. & loaded into tippers manually dispatch to crusher plant. Mining is being carried through the formation of one bench. The height of bench is to be kept 3 m width of benches was kept 3.0 m with face slope 45°.

**II) Proposed method of mining:**

It shall be an opencast semi-mechanized mine. Excavator shall be deployed for removal of big boulders of blasted material from quarry & loading of the excavated mineral in to tractor trolleys. Drilling shall be carried out with 32 mm diameter jack hammers & blasting shall be carried out with slurry explosives. The height & width of bench shall be kept 6 m & 6 m with face slopes 45°. The blasted material shall be loaded by excavator to the tippers. Big boulders will be broken to the required size manually and will be loaded by excavator and will be transported to crusher plant.

**YEAR WISE GRANITE, KHANDA, GITTI, BOULDER PRODUCTION (As per LOI)**

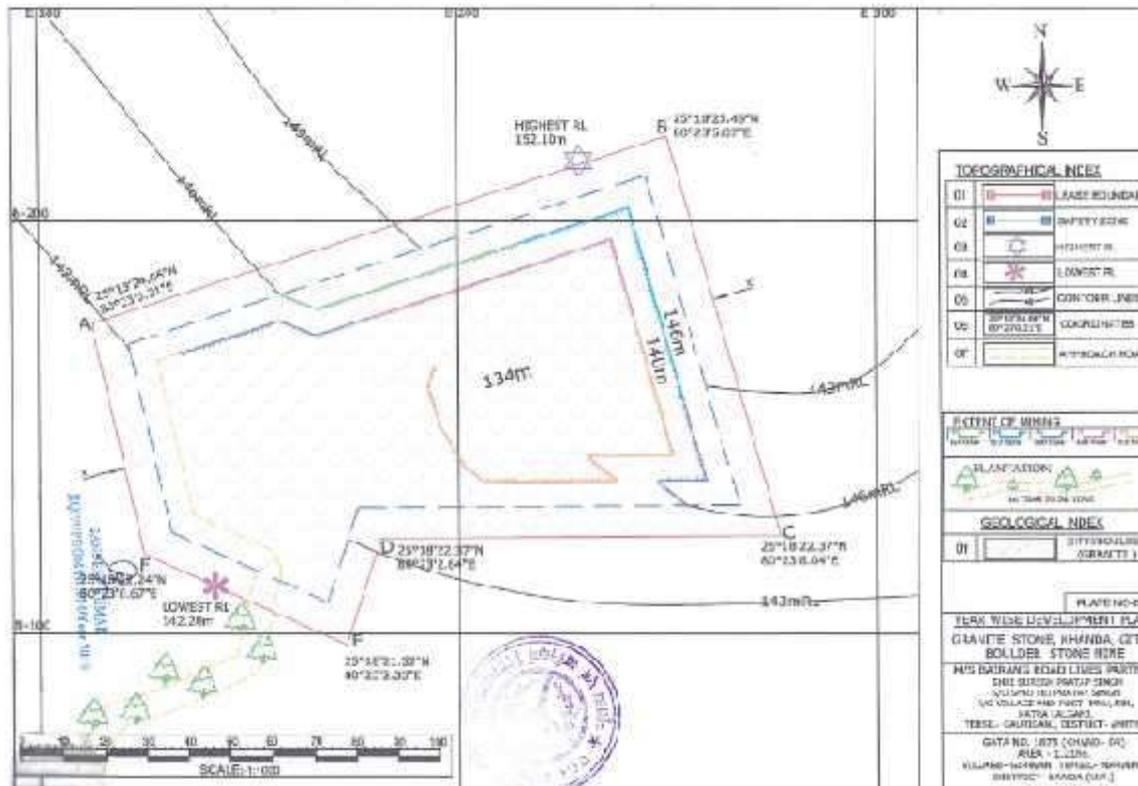
**Table 2.4 Proposed Production in mining plan period – 05 years**

Year	Overburden (m <sup>3</sup> )	ROM Granite(Khanda, Gitti, Boulder) (m <sup>3</sup> )	Saleable Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> )	Sub grade Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> )	Granite (Khanda, Gitti, Boulder) reject (m <sup>3</sup> )	Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> ) to overburden ratio
<b>First</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Second</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Third</b>	Nil	12,100	12,100	Nil	Nil	Nil



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<b>Fourth</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Fifth</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Total</b>		<b>60,500</b>	<b>60,500</b>			



**Fig 2.5- Year wise Development Plan**

**The year wise development and extraction of mineral for first 05 years is detailed as under-**

**1) Production & development in First year.**

Before start mining 7.50 m barrier along the lease boundary shall be marked as non-mining zone. Mining shall be started by slicing from 146mRL bench from dip towards rise side by removing the minerals in 6 m slice and completed 140mRL. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below.



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<b>Bench Level (mRL)</b>	<b>Quantities in benches(cum)</b>	<b>Exploitation of Granite, Khanda, Gitty, Boulder in (cum)</b>	<b>Balance quantities in benches (cum)</b>
146	32400	12,100	20,300
<b>Total</b>	<b>32400</b>	<b>12,100</b>	<b>20,300</b>

**2) Production & development in Second year.**

Mining shall be carried out in the bench 146mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

<b>Bench Level (mRL)</b>	<b>Quantities in benches(cum)</b>	<b>Exploitation of Granite, Khanda, Gitty, Boulder in (cum)</b>	<b>Balance quantities in benches(cum)</b>
146	20,300	12,100	8,200
<b>Total</b>	<b>20,300</b>	<b>12,100</b>	<b>8,200</b>

**3) Production & development in Third year.**

Mining shall be carried out in the bench 146mRL and 140mRL- 134mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

<b>Bench Level (mRL)</b>	<b>Quantities in benches(cum)</b>	<b>Exploitation of Granite, Khanda, Gitty, Boulder</b>	<b>Balance quantities in benches(cum)</b>
--------------------------	-----------------------------------	--	---



		<b>in (cum)</b>	
146	8,200	8,200	0
140-134	58638	<b>3,900</b>	54,738
<b>Total</b>	<b>64,068</b>	<b>12,100</b>	<b>54,738</b>

**4) Production & development in fourth year.**

Mining shall be carried out in the bench 140mRL- 134mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

<b>Bench Level (mRL)</b>	<b>Quantities in benches(cum)</b>	<b>Exploitation of Granite, Khanda, Gitty, Boulder in (cum)</b>	<b>Balance quantities in benches(cum)</b>
140-134	54,738	12,100	42,638
<b>Total</b>	<b>54,738</b>	<b>12,100</b>	<b>42,638</b>

**5) Production & development in fifth year.**

Mining shall be carried out in the bench 140mRL- 134mRL. Haul roads of 6m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

<b>Bench Level (mRL)</b>	<b>Quantities in benches(cum)</b>	<b>Exploitation of Granite, Khanda, Gitty, Boulder in (cum)</b>	<b>Balance quantities in benches(cum)</b>
140-134	42,638	12,100	30,538



<b>Total</b>	<b>42,638</b>	<b>12,100</b>	<b>30,538</b>
--------------	---------------	---------------	---------------

Source: Mine plan

## 2.9 DRILLING & BLASTING

As mentioned earlier the mine will be worked manually in the initial stages and blasting will be limited to jack hammer holes (32 mm diameter) initially 3 m height sub benches shall be developed which shall be converted in 6 m height bench. Jack hammer holes will be drilled as below

Hole depth : 3 m.

Spacing : 1.5 m.

Burden : Nil.

Thus one hole will give a quantity of about :  $3 \times 1.5 = 4.5$

Say= 5 cum

Excavation required per day (Considering 260

Working Days/Years) :  $12,100 \text{ cum} / 260 \text{ days} = 46.53 \text{ cum}$

Thus no. of holes required per day :  $46.53 / 5 = 9.306 \text{ Holes}$

Say= 10 Holes

**Thus, the required number of Jack Hammer-01 (Capacity 10 holes/day)**

**The required number of Compressor – 01 (type Atlas Copco)**

### Methodology of Blasting –

- Blasting will be carried out under the supervision of qualified & experienced blasters following all the rules and guidelines for extraction of required minerals.
- The blasting will be undertaken by suitable explosives having comparable density, usually two cartridge of 250 gm will be sufficient in one hole of 3 m depth.

- c) The number of holes will be distributed in two working benches. As far as possible single row blasting may be preferred & each hole shall be charged with 250 gm explosives depending upon the free face available. The direction of face advance & row of drill holes will so proposed that the direction of fly rock material will be expected to fall over the benches.
- d) Powder ratio @ 1:20 i.e., 250 gms of explosive per hole will be required to reach 05 cum per Kg. of powder factor on the basis past experience in the surrounding area & lithology of rock,
- e) As per powder ratio of 1:20 for the exploitation of daily production 46.53 cum, the required explosive is  $46.53/20 = 2.3265$  say 10 kg. (10 explosive rod of 250 gm. each)

## 2.10 POST MINING LAND USE:

The sanctioned MLA is a virgin land and the mining for the extraction of granted quantity of minor mineral will be started after the grant of environment clearance. At present, there is no any type of pit is present in the mining lease area. However, at the end of the first year period of mining lease granted period the impact on land use will be limited.

Hence, there is no change in the land use of the area in the first 5 years mining plan period of the mining lease of the project.

## 2.11 CONCEPTUAL MINING PLAN

The sanctioned MLA is a virgin land and the mining for the granted is to be started after the grant of environment clearance. The Measurement of the sanctioned Mining lease Area is illustrated as under-

Sanctioned Mine Lease Area	Avg. Length(m)	Avg. width(m)	Lithology
1.21 Ha	157	77	Granite, Khanda, Gitti, Boulder



pumps and wells in the nearby village. Water will be resourced through tankers.

**Table 2.5 water Requirement**

S.NO.	Purpose	Manpower/Area	Water Demand (KLD)	Source
1.	Drinking	Manpower 30*10L=300lpcd	0.30	Nearby village
2.	For Mobile Toilet	Manpower (30) 30*10L=300 lpcd	0.30	Private tanker (Treated Water /Pond Water)
3.	Plantation	100 trees *2L = 200L	0.20	Private tanker (Treated Water /Pond Water)
4.	Dust Suppression	=(598 m Length x 6mWidth=3588m <sup>2</sup> )x2 lpcd/Sq.m = 7176 lpcd	7.18	Private Tanker (Treated Water /Pond Water )
	<b>Total</b>		<b>7.98</b>	

### 2.12.2 Power

No power consumption will be there, as mine will work only in day time.

### 2.12.3 Infrastructure

The site services like temporary rest shelter, first aid box, domestic water facilities and septic tanks will be provided to workers at the mine site.

### 2.12.4 Manpower

The mine manager cum mining engineer should a graduate mining engineer holding at least second class manager's certificate. The mate-cum-blaster should hold mining mate certificate of competency.

Thus category-wise employments will be as below:

Mines manager/mining engineer (Full time) : 1

Mines mate / Blaster	: 1
Skilled:	
Drivers	: 2
Supervisor	: 1
Time Keeper	: 1
Office Assistant/Dispatch Supervisor	: 1
Semiskilled:	
Compressor operator	: 1
Wagon Drill operator	: 1
Un-skilled:	
Piece rated workers	: 20
Total	: 30

### 2.13 USE OF MINERAL

The end products of the mining will be used for the construction of buildings, dams, bridges, tunnels and roads. Some of the extracted mineral is sold to the local market. There is no probability of finding mineral other than granite, khanda, gitty, boulder in the mining lease area.

### 2.14 MINERAL BENEFICIATION

No mineral beneficiation is involved for this mineral. The materials are excavated in form of slabs, and the rest is taken out stones of small sizes i.e. Granite, Khanda, Gitty, Boulder etc.

## **Chapter- 3**

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# **Description of Environment**

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
District- Banda, Uttar Pradesh  
Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
Prop.M/s Bajrang Road Lines  
Partner-Shri Suresh Pratap Singh

EIA/EMP  
CHAPTER-III: DESCRIPTION OF ENVIRONMENT

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# CHAPTER-III



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
 District- Banda, Uttar Pradesh  
 Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
 Prop.M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP  
 CHAPTER-III: DESCRIPTION OF ENVIRONMENT

**CHAPTER-III**  
**DESCRIPTION OF ENVIRONMENT**  
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3.1.5	NOISE ENVIRONMENT	25/III
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3.3	SOCIO ECONOMIC & ITS BASELINE DATA	47/III



### 3.0 INTRODUCTION

This section contains the description of baseline studies of the 10 km radius of the area surrounding Gata No.1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, Uttar Pradesh. The expected project cost of the mining is Rs.59.13lakhs; Area- 1.21Ha.with production has been estimated 12100m<sup>3</sup>/year. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

### 3.1 BASELINE DATA

#### 3.1.1 LAND ENVIRONMENT

Land-Use/land cover pattern of the study area delineating all the features has been studied through satellite imagery. The lease area is located on a hill where mining of this type is already going on. Physiographically, the maximum and minimum elevation of the area is 152.10 m and 142.20 m respectively. The general slope of applied area is from North to South direction. The surrounding area consists of any thick vegetation except for patched agricultural lands.

The land use of the study area is tabulated below.

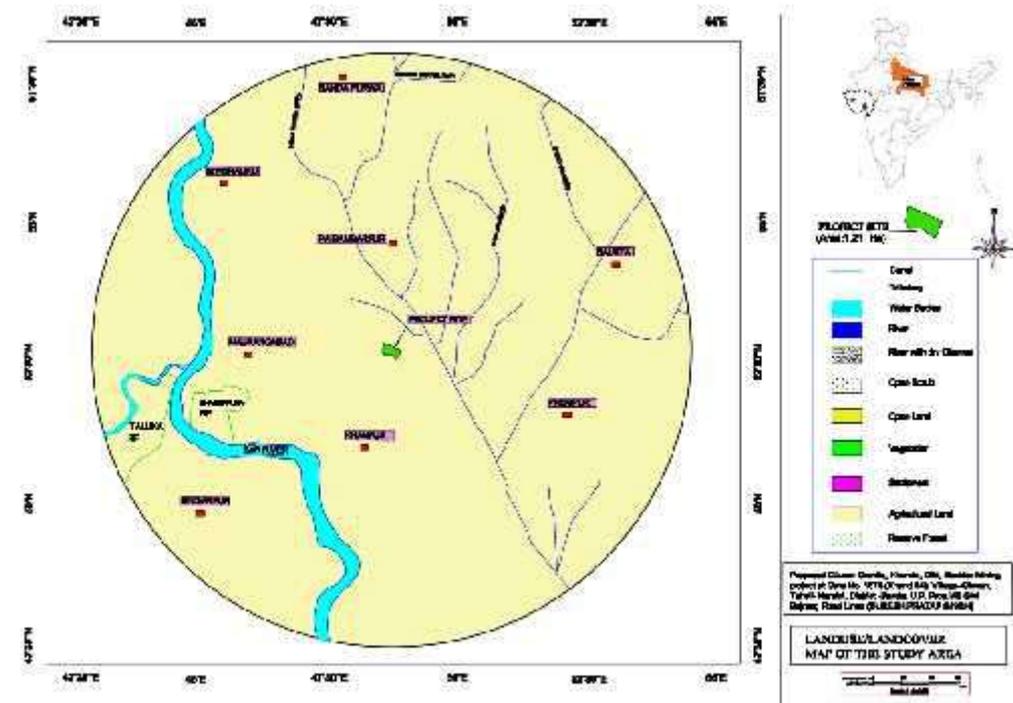
**Table 3.1 (i): Land Use cover of the project study area**

S. No.	Description	Area in Hectares	% share in total area
1.	Water Bodies	173.23	0.52
2.	River	401.37	1.22
3.	River With Dry Channel	230.34	0.70
4.	Vegetation	322.96	0.98
5.	Open Scrub	4441.66	13.54
6.	Open/ Waste Land	1775.67	5.14
7.	Settlement	509.99	1.55
8.	Agricultural Land	24939.12	76.04
<b>Total</b>		<b>32794.34</b>	<b>100</b>

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
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There will be no diversion or modification of any land use due to the mining activity.



**Fig 3.1- Land use map of study area**

### 3.1.2 AIR ENVIRONMENT

Ambient air quality monitoring stations were selected primarily on the basis of surface influence, demographic influence and meteorological influence. 24 hourly monitoring was carried out for SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>& PM<sub>2.5</sub> twice a week at each station. This study was done during post monsoon season for a period of 3 months (October 2020 to December 2020).

#### b. Method of monitoring

The Central Pollution Control Board (CPCB) has published comprehensive document on emission testing regulations ("Emission Regulations Part-3, 1985"). Those procedures relevant to the particulate monitoring are

summarized below:

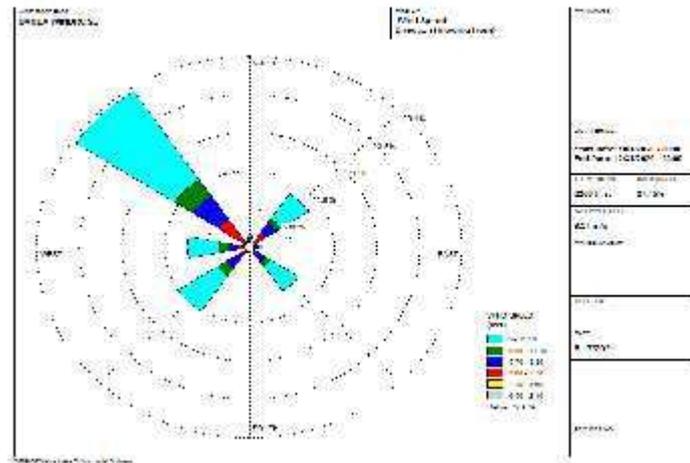
**Table 3.1 (ii): Methods adopted for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub>**

Parameters	Technique	Technical Protocol	Minimum Detectable Limit
PM <sub>2.5</sub>	Gravimetric method	CPCB Guideline Vol. I May' 2011	5 (µg/m <sup>3</sup> )
PM <sub>10</sub>	Gravimetric method	IS 5182 (Part-XXIII)	5 (µg/m <sup>3</sup> )
Sulphur Dioxide	Improved West and Gaeke	IS-5182 (Part-II)	5 (µg/m <sup>3</sup> )
Nitrogen Dioxide	Modified Jacob &Hochheiser	IS-5182 (Part-VI)	6 (µg/m <sup>3</sup> )

**i. Particulate Matter (PM):-**

The CPCB method and IS 5182 (Part-XXIII) adopt a very similar approach to particulate sampling. There are some differences in the expressions used, but they are generally of no practical significance. It is recommended that CPCB method is adapted.

**a. Wind Rose Diagram**



**Fig 3.2(i)- Wind rose Diagram**

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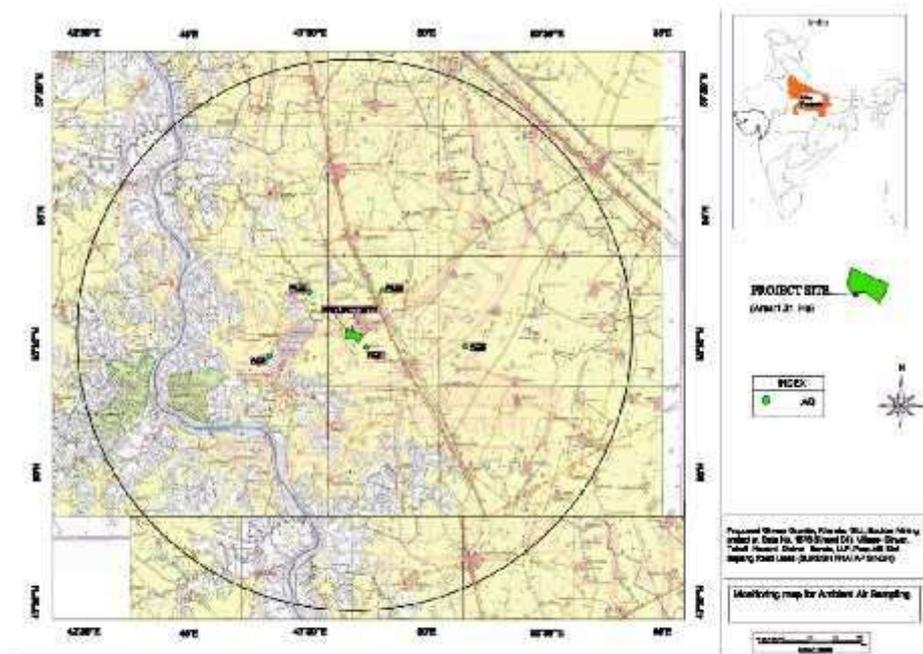
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### ii. Equipment Calibration:

For accurate testing of emission sources, the components of the sampling train is calibrated by outsource and supplier (Master Calibrator) standards and solutions are used, calibrated under certified reference material. The Ambient air quality monitoring locations are marked in Map. The ambient air quality data were collected to find the existing GLC. The data is given in Table No. 3.1 (iv).

**Table 3.1 (iii) Ambient air quality monitoring stations**

S.NO.	LOCATION	CODE	DISTANCE AND DIRECTION
1.	Project Site	AQ1	320m from site in SE Downwind
2.	Khohi	AQ2	2.90km in NW Upwind
3.	MajhgawanSeodha	AQ3	2.28km in NE
4.	Barimanpur	AQ4	3.25 km in SW
5.	Saripur	AQ5	3.77 km in E



**Fig-3.2(ii) Air quality monitoring location**

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**Table 3.1 (iv): Ambient Air Quality Status**

Ambient Air Quality Data October, 2020 to December, 2020.				AQ- 1 Project site	
S.No	Date	PM <sub>2.5</sub> , µg/m <sup>3</sup>	PM <sub>10</sub> , µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2020	47.8	79.34	7.7	17.4
2	04.10.2020	45.4	81.48	8.1	19.0
3	08.10.2020	49.4	78.37	8.8	14.7
4	12.10.2020	51.8	77.59	7.6	15.9
5	16.10.2020	50.5	80.87	7.9	18.2
6	20.10.2020	45.5	78.44	6.2	16.5
7	24.10.2020	48.5	81.76	5.9	15.8
8	28.10.2020	43.5	79.43	8.9	16.2
9	01.11.2020	42.7	77.65	6.9	15.8
10	04.11.2020	41.5	75.52	8.1	16.7
11	08.11.2020	43.5	76.90	8.4	15.7
12	12.11.2020	46.8	75.63	7.8	19.7
13	16.11.2020	44.5	77.79	8.4	18.2
14	20.11.2020	38.2	80.34	8.8	20.1
15	24.11.2020	41.6	81.99	9.9	20.7
16	28.11.2020	49.0	79.27	10.2	19.9
17	01.12.2020	50.5	81.70	11.9	17.6
18	04.12.2020	48.5	84.78	11.7	17.8
19	08.12.2020	47.8	86.32	7.5	14.3
20	12.12.2020	46.5	89.76	10.9	16.7
21	16.12.2020	44.5	91.45	8.9	15.9
22	20.12.2020	43.7	89.43	9.4	16.3
23	24.12.2020	45.3	87.23	9.8	15.7
24	28.12.2020	46.7	84.57	10.6	16.9
	<b>Min</b>	<b>38.2</b>	<b>75.52</b>	<b>5.9</b>	<b>14.3</b>
	<b>Max</b>	<b>51.8</b>	<b>91.45</b>	<b>11.9</b>	<b>20.7</b>
	<b>Average</b>	<b>45.99</b>	<b>81.57</b>	<b>8.76</b>	<b>17.15</b>
	<b>98 Percentile</b>	<b>51.20</b>	<b>90.67</b>	<b>11.81</b>	<b>20.42</b>
<b>NAAQS, For 24 hourly</b>		<b>60</b>	<b>100</b>	<b>80</b>	<b>80</b>



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Ambient Air Quality Data October, 2020 to December, 2020.				AQ- 2	
S.No	Date	PM <sub>2.5</sub> , µg/m <sup>3</sup>	PM <sub>10</sub> , µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup> ,	NO <sub>x</sub> µg/m <sup>3</sup>
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2020	42.3	81.27	7.0	18.2
2	04.10.2020	47.5	79.53	7.9	17.9
3	08.10.2020	49.2	78.20	7.3	16.7
4	12.10.2020	50.5	76.53	6.8	18.3
5	16.10.2020	48.5	74.15	6.4	18.4
6	20.10.2020	46.7	75.29	8.9	17.8
7	24.10.2020	48.5	78.56	8.7	17.7
8	28.10.2020	50.3	76.16	7.4	16.7
9	01.11.2020	49.8	78.38	6.7	15.3
10	04.11.2020	48.5	76.50	8.2	15.7
11	08.11.2020	46.2	78.23	9.4	17.8
12	12.11.2020	43.1	79.62	9.8	14.2
13	16.11.2020	42.7	82.74	10.3	15.9
14	20.11.2020	39.7	85.43	11.7	17.7
15	24.11.2020	41.6	82.24	10.2	19.3
16	28.11.2020	42.6	86.57	11.4	20.3
17	01.12.2020	43.5	88.90	10.9	20.8
18	04.12.2020	45.9	85.63	10.4	18.4
19	08.12.2020	48.5	86.62	9.4	19.2
20	12.12.2020	49.1	90.39	8.9	17.5
21	16.12.2020	51.7	89.72	7.4	16.8
22	20.12.2020	48.2	90.14	7.6	17.8
23	24.12.2020	50.4	89.76	6.8	14.9
24	28.12.2020	49.2	88.32	6.6	16.6
	<b>Min</b>	<b>39.7</b>	<b>74.15</b>	<b>6.4</b>	<b>14.2</b>
	<b>Max</b>	<b>51.7</b>	<b>90.39</b>	<b>11.7</b>	<b>20.8</b>
	<b>Average</b>	<b>46.84</b>	<b>82.45</b>	<b>8.59</b>	<b>17.50</b>
	<b>98 Percentile</b>	<b>51.15</b>	<b>90.28</b>	<b>11.56</b>	<b>20.57</b>
	<b>NAAQS, For 24 hourly</b>	<b>60</b>	<b>100</b>	<b>80</b>	<b>80</b>



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Partner-Shri Suresh Pratap Singh

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Ambient Air Quality Data October, 2020 to December, 2020				AQ- 3	
S.No	Date	PM <sub>2.5</sub> , µg/m <sup>3</sup>	PM <sub>10</sub> , µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> , µg/m <sup>3</sup>
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2020	43.2	74.49	7.3	15.9
2	04.10.2020	42.5	72.06	7.8	17.6
3	08.10.2020	45.3	74.62	9.2	15.7
4	12.10.2020	44.1	77.48	9.6	16.8
5	16.10.2020	45.5	79.35	8.4	17.4
6	20.10.2020	47.3	80.52	7.3	17.0
7	24.10.2020	50.5	83.89	6.5	15.6
8	28.10.2020	49.5	85.46	7.2	16.6
9	01.11.2020	47.9	80.78	8.9	18.9
10	04.11.2020	45.8	84.36	7.8	19.3
11	08.11.2020	48.5	86.54	9.3	22.5
12	12.11.2020	43.8	83.67	10.7	18.5
13	16.11.2020	42.5	84.69	11.9	17.4
14	20.11.2020	46.8	80.23	12.3	15.7
15	24.11.2020	50.6	78.28	11.7	17.8
16	28.11.2020	51.5	77.20	10.3	16.3
17	01.12.2020	48.5	79.70	9.2	17.2
18	04.12.2020	46.9	76.34	8.9	16.9
19	08.12.2020	50.5	79.67	7.4	15.3
20	12.12.2020	53.6	81.76	8.3	14.7
21	16.12.2020	48.7	83.40	6.9	15.7
22	20.12.2020	50.8	86.47	8.5	17.4
23	24.12.2020	51.38	88.23	8.1	16.3
24	28.12.2020	48.70	92.39	7.6	15.4
	<b>Min</b>	<b>42.5</b>	<b>72.06</b>	<b>6.5</b>	<b>14.7</b>
	<b>Max</b>	<b>53.6</b>	<b>92.39</b>	<b>12.3</b>	<b>22.5</b>
	<b>Average</b>	<b>47.68</b>	<b>81.32</b>	<b>8.80</b>	<b>17.00</b>
	<b>98 Percentile</b>	<b>52.63</b>	<b>90.48</b>	<b>12.12</b>	<b>21.03</b>
	<b>NAAQS For 24 hourly</b>	<b>60</b>	<b>100</b>	<b>80</b>	<b>80</b>



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Ambient Air Quality Data October 2020 to December 2020.				AQ-4	
S.No	Date	PM <sub>2.5</sub> , µg/m <sup>3</sup>	PM <sub>10</sub> , µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup> ,	NO <sub>x</sub> µg/m <sup>3</sup>
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2020	49.6	80.47	6.7	18.8
2	04.10.2020	47.3	79.56	7.2	17.0
3	08.10.2020	44.2	76.16	7.8	17.8
4	12.10.2020	47.1	75.43	7.6	18.3
5	16.10.2020	50.7	76.50	8.3	16.9
6	20.10.2020	52.2	78.28	8.5	17.2
7	24.10.2020	49.5	74.62	9.4	18.3
8	28.10.2020	47.2	75.20	9.6	18.4
9	01.11.2020	45.9	77.43	10.8	17.8
10	04.11.2020	47.3	76.24	10.0	19.7
11	08.11.2020	49.5	78.30	9.2	20.0
12	12.11.2020	48.5	81.54	9.8	19.3
13	16.11.2020	52.5	83.89	10.3	17.5
14	20.11.2020	50.9	80.46	9.9	18.4
15	24.11.2020	47.5	83.65	10.4	19.3
16	28.11.2020	48.7	79.42	9.3	18.8
17	01.12.2020	46.3	77.12	7.5	17.9
18	04.12.2020	44.5	78.23	9.0	18.4
19	08.12.2020	42.7	76.57	9.7	17.2
20	12.12.2020	41.5	75.42	8.3	18.3
21	16.12.2020	42.9	76.55	7.7	17.6
22	20.12.2020	45.5	73.90	7.5	18.8
23	24.12.2020	46.2	76.72	9.6	16.8
24	28.12.2020	43.8	79.45	9.8	19.4
	<b>Min</b>	<b>41.5</b>	<b>73.9</b>	<b>6.7</b>	<b>16.8</b>
	<b>Max</b>	<b>52.5</b>	<b>83.89</b>	<b>10.8</b>	<b>20.0</b>
	<b>Average</b>	<b>47.17</b>	<b>77.96</b>	<b>8.91</b>	<b>18.25</b>
	<b>98 Percentile</b>	<b>52.36</b>	<b>83.78</b>	<b>10.62</b>	<b>19.86</b>
<b>NAAQS, For 24 hourly</b>		<b>60</b>	<b>100</b>	<b>80</b>	<b>80</b>



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Ambient Air Quality Data October, 2020 to December, 2020.				AQ- 5	
S.No	Date	PM <sub>2.5</sub> , µg/m <sup>3</sup>	PM <sub>10</sub> , µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> , µg/m <sup>3</sup>
		Gravimetric	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6
1	01.10.2020	43.8	85.38	5.3	19.2
2	04.10.2020	40.7	83.86	6.0	18.9
3	08.10.2020	39.3	86.62	5.4	16.9
4	12.10.2020	38.5	84.48	5.8	17.5
5	16.10.2020	40.8	86.45	6.9	16.4
6	20.10.2020	43.5	82.42	7.2	17.8
7	24.10.2020	45.2	80.86	7.8	18.3
8	28.10.2020	47.3	78.43	8.2	16.3
9	01.11.2020	49.3	76.70	7.8	17.8
10	04.11.2020	47.3	80.51	8.4	16.2
11	08.11.2020	46.5	78.90	8.9	15.7
12	12.11.2020	48.8	76.64	9.4	18.9
13	16.11.2020	50.5	74.78	10.6	17.3
14	20.11.2020	48.5	76.81	9.3	18.8
15	24.11.2020	47.2	78.92	8.7	16.2
16	28.11.2020	44.8	76.22	8.6	19.9
17	01.12.2020	43.5	72.78	7.8	15.7
18	04.12.2020	47.2	74.50	7.2	17.5
19	08.12.2020	49.6	76.49	8.6	16.9
20	12.12.2020	50.3	78.23	8.4	17.4
21	16.12.2020	51.9	79.45	7.6	18.8
22	20.12.2020	49.5	82.46	7.2	16.2
23	24.12.2020	50.7	84.23	7.6	17.7
24	28.12.2020	47.4	86.54	8.2	15.8
	<b>Min</b>	<b>38.5</b>	<b>72.78</b>	<b>5.3</b>	<b>15.7</b>
	<b>Max</b>	<b>51.9</b>	<b>86.62</b>	<b>10.6</b>	<b>19.9</b>
	<b>Average</b>	<b>46.34</b>	<b>80.11</b>	<b>7.79</b>	<b>17.42</b>
	<b>98 Percentile</b>	<b>51.35</b>	<b>86.58</b>	<b>10.05</b>	<b>19.58</b>
<b>NAAQS, For 24 hourly</b>		<b>60</b>	<b>100</b>	<b>80</b>	<b>80</b>



### Observations:

Ambient Air Quality Monitoring reveals that the maximum & minimum concentrations of PM<sub>2.5</sub> for all the 5 AQ monitoring stations were found to be 53.6µg/m<sup>3</sup> at AQ-3 and 38.20µg/m<sup>3</sup> at AQ-1, respectively. The maximum & minimum concentrations of PM<sub>10</sub> for all the 5 AQ monitoring stations were found to be 92.39µg/m<sup>3</sup> at AQ-3 and 72.06µg/m<sup>3</sup> at AQ-3, respectively.

As far as the gaseous pollutants SO<sub>2</sub> and NO<sub>x</sub> are concerned, the prescribed CPCB limit of 80µg/m<sup>3</sup> and 100µg/m<sup>3</sup> for residential and rural areas has never surpassed at any station. The maximum & minimum concentrations of SO<sub>2</sub> were found to be 12.3µg/m<sup>3</sup> at AQ-3 & less than 5.3µg/m<sup>3</sup> at AQ-5 respectively. The maximum & minimum concentrations of NO<sub>x</sub> were found to be 22.5µg/m<sup>3</sup> at AQ-5 & 14.2µg/m<sup>3</sup> at AQ-2 respectively

### Free SiO<sub>2</sub>(in µg/m<sup>3</sup>):

SiO <sub>2</sub>	AQ1	AQ2	AQ3	AQ4	AQ5
<b>Minimum</b>	1.683	1.531	1.568	1.518	1.714
<b>Maximum</b>	1.781	1.752	1.924	1.746	1.739

The standard for Respirable dust is 3 µg /m<sup>3</sup> for 8 hour of working period where free silica content should not exceed 5% as prescribed by Directorate General of Mines Safety.

### Observations:

The minimum & maximum concentrations of SiO<sub>2</sub> were found to be 1.518µg/m<sup>3</sup> at AQ4 & 1.924µg/m<sup>3</sup> at AQ3 respectively.



### 3.1.3 WATER ENVIRONMENT

#### a) Ground water

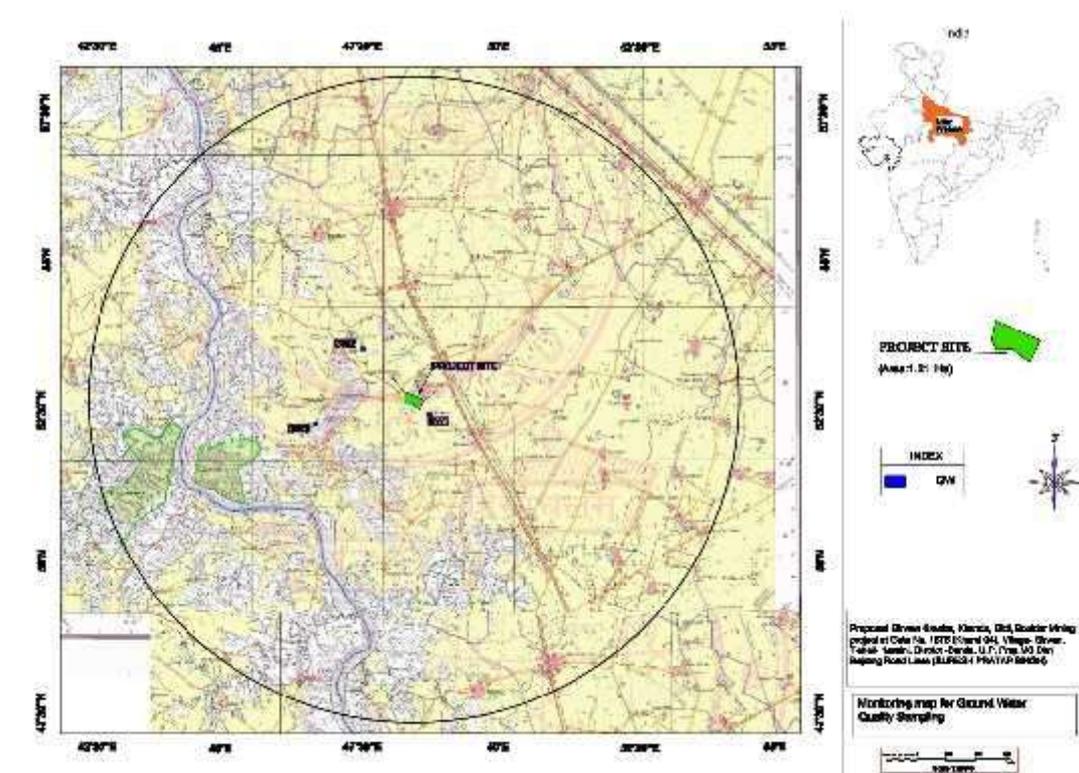
Three water samples were collected from the study area. The physico-chemical analysis of the water samples is given in the Table 3.1 (vi).

The Ground water sampling locations are marked in figure-3.2

**Table 3.1 (v)**

**Ground water sampling locations**

S.NO.	LOCATION	CODE	DISTANCE AND DIRECTION
1	Project Site	GW1	320 m in SE
2	Khohi	GW2	2.90 km in NW
3	Barimanpur	GW3	3.25km in SW



**Fig- 3.3 Ground water sampling locations**

**Table 3.1 (vi) Physico-chemical properties of ground water (Oct, 2020)**

S.No	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit				
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	<1	<1	<1
5	pH	6.5-8.5	No Relaxation	-	7.48	7.65	7.72
6	Total Hardness (as CaCO <sub>3</sub> )	200	600	mg/l	327	345	310
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.12	0.10	0.09
8	Chlorides (as Cl)	250	1000	mg/l	116	126	110
9	Fluoride (as F )	1	1.5	mg/l	0.4	0.4	0.5
10	TDS	500	2000	mg/l	578	632	540
11	Calcium(as Ca <sup>2+</sup> )	75	200	mg/l	78	82	75
12	Magnesium (as Mg <sup>2+</sup> )	30	100	mg/l	31	33	30
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.05	0.06	0.04
15	Sulphate (as SO <sub>4</sub> )	200	400	mg/l	42	56	38
16	Nitrate(as NO <sub>3</sub> )	45	No Relaxation	mg/l	3.2	3.8	2.8
17	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Cadmium (as Cd)	0.003	No Relaxation	mg/l	<0.01	<0.01	<0.01
20	Selenium ( as Se )	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01
22	Cyanide (as CN )	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.04	0.05	0.03
25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr <sup>6+</sup> )	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO <sub>3</sub> )	200	600	mg/l	280	295	270
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.2	0.2	0.1
<b>Bacteriological Parameter</b>							



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1	Total Coliform	Shall not be detectable		MPN/100ml	Not Detected (<2)	Not Detected (<2)	Not Detected (<2)
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

**ND: Not Detectable**

**Physico-chemical properties of ground water (Nov, 2020)**

S.No.	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit				
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	<1	<1	<1
5	pH	6.5-8.5	No Relaxation	-	7.47	7.58	7.71
6	Total Hardness (as CaCO <sub>3</sub> )	200	600	mg/l	335	352	325
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.13	0.14	0.11
8	Chlorides (as Cl)	250	1000	mg/l	118	130	116
9	Fluoride (as F)	1	1.5	mg/l	0.5	0.7	0.6
10	TDS	500	2000	mg/l	605	660	578
11	Calcium(as Ca <sup>2+</sup> )	75	200	mg/l	80	84	78
12	Magnesium (as Mg <sup>2+</sup> )	30	100	mg/l	32	34	31
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.05	0.07	0.05
15	Sulphate (as SO <sub>4</sub> )	200	400	mg/l	48	59	41
16	Nitrate(as NO <sub>3</sub> )	45	No Relaxation	mg/l	3.5	4.1	3.2
17	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Cadmium (as Cd)	0.003	No Relaxation	mg/l	<0.01	<0.01	<0.01
20	Selenium ( as Se )	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01
22	Cyanide (as CN )	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.05	0.06	0.04
25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr <sup>6+</sup> )	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01



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27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO <sub>3</sub> )	200	600	mg/l	287	302	276
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.2	0.2	0.1
<b>Bacteriological Parameter</b>							
1	Total Coliform	Shall not be detectable		MPN/100ml	Not Detected (<2)	Not Detected (<2)	Not Detected (<2)
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

**Physico-chemical properties of ground water (Dec, 2020)**

S.No.	Parameter	Limit (as per IS:10500:2012)		Unit	GW1	GW2	GW3
		Desirable Limit	Permissible Limit				
1	Colour	5	15	Hazen	<5	<5	<5
2	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
3	Taste	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable
4	Turbidity	1	5	NTU	<1	<1	<1
5	pH	6.5-8.5	No Relaxation	-	7.41	7.52	7.65
6	Total Hardness (as CaCO <sub>3</sub> )	200	600	mg/l	347	360	336
7	Iron (as Fe)	0.3	No Relaxation	mg/l	0.14	0.17	0.13
8	Chlorides (as Cl)	250	1000	mg/l	123	134	124
9	Fluoride (as F)	1	1.5	mg/l	0.6	0.7	0.6
10	TDS	500	2000	mg/l	638	691	615
11	Calcium(as Ca <sup>2+</sup> )	75	200	mg/l	83	86	80
12	Magnesium (as Mg <sup>2+</sup> )	30	100	mg/l	34	35	32
13	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01
14	Manganese(as Mn)	0.1	0.3	mg/l	0.05	0.04	0.04
15	Sulphate (as SO <sub>4</sub> )	200	400	mg/l	54	62	47
16	Nitrate(as NO <sub>3</sub> )	45	No Relaxation	mg/l	3.8	4.3	3.5
17	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001	0.002	mg/l	<0.001	<0.001	<0.001
18	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001
19	Cadmium (as Cd)	0.003	No Relaxation	mg/l	<0.01	<0.01	<0.01
20	Selenium ( as Se )	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
21	Arsenic (as As)	0.01	0.05	mg/l	<0.01	<0.01	<0.01



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22	Cyanide (as CN)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
23	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01
24	Zinc (as Zn)	5	15	mg/l	0.06	0.07	0.05
25	Anionic Detergent (as MBAS)	0.2	1	mg/l	<0.01	<0.01	<0.01
26	Chromium (as Cr6+)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01
27	Mineral oil	0.5	No Relaxation	mg/l	<0.1	<0.1	<0.1
28	Alkalinity (as CaCO <sub>3</sub> )	200	600	mg/l	302	325	290
29	Aluminum (as Al)	0.03	0.2	mg/l	<0.02	<0.02	<0.02
30	Boron (as B)	0.5	1	mg/l	0.2	0.1	0.1
<b>Bacteriological Parameter</b>							
1	Total Coliform	Shall not be detectable		MPN/100ml	Not Detected (<2)	Not Detected (<2)	Not Detected (<2)
2	E.coli	Shall not be detectable		E.coli /100ml	Absent	Absent	Absent

**ND: Not Detectable**

**Observation:**

Analysis results of ground water in the study area reveal the following: -

- ) pH varies from 7.41 to 7.75.
- ) Total hardness varies from 310 to 360 mg/l.
- ) Total dissolved solids vary from 540 mg/l to 691 mg/l.

The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500.

Fluorides and nitrates are within the permissible limits. Most of the parameters in ground water sources are well within the permissible limits as per IS:10500-1991, Drinking Water Standards.

**b) Surface water**

The surface water samples have been collected from River which the project site is at a distance of 5Km. All sampling locations are marked in

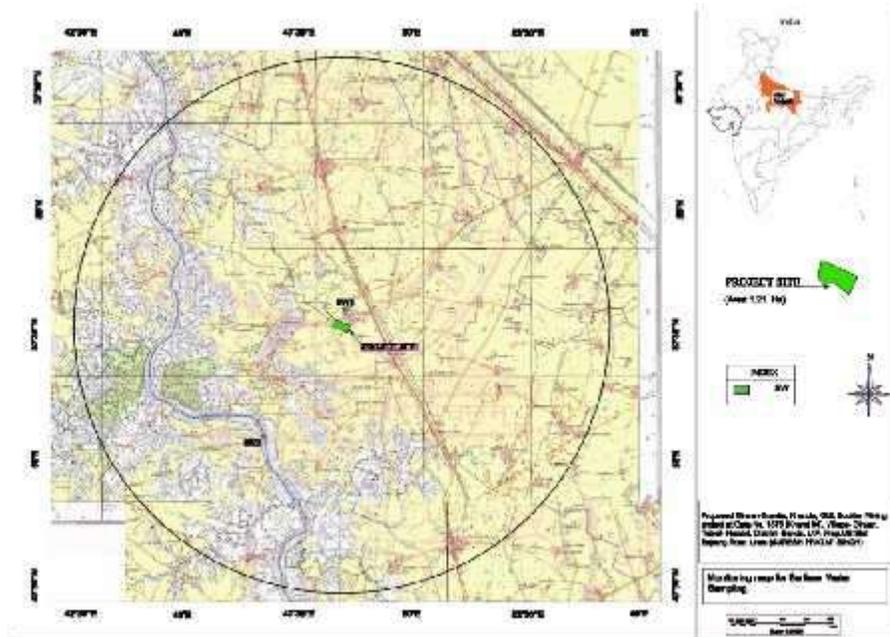
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figure- 3.3. The Physico-chemical analysis of the water samples is given in the Table 3.1 (ix).

**Table 3.1 (vii) Surface water sampling locations**

S.NO.	LOCATION	CODE	DISTANCE AND DIRECTION
1	Pond near Girwan village	SW1	0.75km N
2	Ken River	SW2	5.0 km SW



**Fig- 3.4 Surface water sampling locations**

**Table 3.1 (viii) Physico-chemical properties of surface water (Oct, 2020)**

S.No.	Parameter	Unit	S.W. 1	SW 2
			Study area	Study area
1	pH	-	7.68	7.62
2	Dissolved Oxygen	mg/l	6.8	6.5
3	BOD(3Daysat27°C)	mg/l	2.3	2.5
4	Free Ammonia(as N)	mg/l	<0.1	<0.1

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5	Sodium Adsorption Ratio	-	0.46	0.59
6	Boron	mg/l	0.2	0.2
7	Conductivity	µmhos/cm	335	383
8	Temperature	(°C)	18.6	18.4
9	Turbidity	NTU	5	5
10	Magnesium Hardness(asCaCO3)	mg/l	47	51
11	Total Alkalinity (asCaCO3)	mg/l	105	112
12	Chloride (as Cl)	mg/l	25	31
13	Sulphate (as SO <sub>4</sub> )	mg/l	15	20
14	Nitrate(as NO <sub>3</sub> )	mg/l	0.4	0.5
15	Fluoride(as F)	mg/l	0.5	0.6
16	Sodium (as Na)	mg/l	12	16
17	Potassium(as K)	mg/l	2.1	2.2
18	TKN (as N)	mg/l	0.4	0.5
19	Total Phosphorous (as P)	mg/l	0.06	0.07
20	COD	mg/l	10	12
21	Phenolic compounds (asC <sub>6</sub> H <sub>5</sub> OH)	mg/l	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.11	0.14
24	Cadmium (as Cd)	mg/l	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.05	0.06
26	Arsenic (as As)	mg/l	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01
30	TDS	mg/l	204	231
<b>Bacteriological Parameters</b>				
1	Total Coliform	MPN/100ml	630	900
2	Faecal Coliform	MPN/100ml	200	320

**Physico-chemical properties of surface water (Nov, 2020)**

S.No.	Parameter	Unit	S.W. 1	SW 2
			Study area	Study area
1	pH	-	7.69	7.59
2	Dissolved Oxygen	mg/l	6.5	6.3



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3	BOD(3Daysat27°C)	mg/l	2.5	2.7
4	Free Ammonia(as N)	mg/l	<0.1	<0.1
5	Sodium Adsorption Ratio	-	0.49	0.65
6	Boron	mg/l	0.2	0.2
7	Conductivity	µmhos/cm	359	408
8	Temperature	(°C)	15.7	15.4
9	Turbidity	NTU	6	6
10	Magnesium Hardness(asCaCO3)	mg/l	49	53
11	Total Alkalinity (asCaCO3)	mg/l	108	115
12	Chloride (as Cl)	mg/l	28	34
13	Sulphate (as SO <sub>4</sub> )	mg/l	17	22
14	Nitrate(as NO <sub>3</sub> )	mg/l	0.5	0.7
15	Fluoride(as F)	mg/l	0.5	0.6
16	Sodium (as Na)	mg/l	13	18
17	Potassium(as K)	mg/l	2.3	2.5
18	TKN (as N)	mg/l	0.5	0.6
19	Total Phosphorous (as P)	mg/l	0.06	0.07
20	COD	mg/l	12	14
21	Phenolic compounds (asC <sub>6</sub> H <sub>5</sub> OH)	mg/l	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.12	0.15
24	Cadmium (as Cd)	mg/l	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.06	0.07
26	Arsenic (as As)	mg/l	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01
30	TDS	mg/l	215	245
<b>Bacteriological Parameters</b>				
1	Total Coliform	MPN/100ml	820	1000
2	Faecal Coliform	MPN/100ml	270	330

**Physico-chemical properties of surface water (Dec, 2020)**

S.No.	Parameter	Unit	S.W. 1	SW 2
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			Study area	Study area
1	pH	-	7.61	7.54
2	Dissolved Oxygen	mg/l	6.2	5.9
3	BOD(3Daysat27°C)	mg/l	2.8	3.5
4	Free Ammonia(as N)	mg/l	<0.1	<0.1
5	Sodium Adsorption Ratio	-	0.77	0.84
6	Boron	mg/l	0.2	0.3
7	Conductivity	µmhos/cm	430	469
8	Temperature	(°C)	14.5	14.1
9	Turbidity	NTU	7	7
10	Magnesium Hardness(asCaCO <sub>3</sub> )	mg/l	52	56
11	Total Alkalinity (asCaCO <sub>3</sub> )	mg/l	113	120
12	Chloride (as Cl)	mg/l	31	36
13	Sulphate (as SO <sub>4</sub> )	mg/l	31	36
14	Nitrate(as NO <sub>3</sub> )	mg/l	0.6	0.8
15	Fluoride(as F)	mg/l	0.5	0.6
16	Sodium (as Na)	mg/l	21	24
17	Potassium(as K)	mg/l	2.5	2.8
18	TKN (as N)	mg/l	0.7	0.8
19	Total Phosphorous (as P)	mg/l	0.07	0.08
20	COD	mg/l	14	16
21	Phenolic compounds (asC <sub>6</sub> H <sub>5</sub> OH)	mg/l	<0.001	<0.001
22	Lead (as Pb)	mg/l	<0.01	<0.01
23	Iron (as Fe)	mg/l	0.15	0.16
24	Cadmium (as Cd)	mg/l	<0.001	<0.001
25	Zinc (as Zn)	mg/l	0.07	0.08
26	Arsenic (as As)	mg/l	<0.01	<0.01
27	Mercury (as Hg)	mg/l	<0.001	<0.001
28	Chromium (as Cr)	mg/l	<0.01	<0.01
29	Nickel (as Ni)	mg/l	<0.01	<0.01
30	TDS	mg/l	252	278
<b>Bacteriological Parameters</b>				
1	Total Coliform	MPN/ 100ml	1300	1600
2	Faecal Coliform	MPN/ 100ml	410	500



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### Observation:

The analysis results indicate that the pH ranges between 7.59 and 7.69.

Dissolved Oxygen (DO) was observed in the range of 5.9 to 6.8 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 2.3-3.5 mg/l.

The chlorides and Sulphates were found to be in the range of 25-39 mg/l and 15-40 mg/l respectively.

Bacteriological examination of surface water samples revealed the presence of total coliform in range of 630 MPN/100 ml to 1600 MPN/100 ml against the limit of 5000 MPN/100 ml.

Based on the results it is evident that most of the parameters of the samples comply with 'Category C' standards of CPCB, indicating their suitability for drinking water source with conventional treatment followed by disinfection.

### 3.1.4 SOIL ENVIRONMENT

Soil may be defined as a thin layer of earth's crust, a medium for the growth of plants. The soil characteristics include both physical and chemical properties. The soil survey and soil sample were carried out / collected to assess the soil characteristics of the study area. Soil samples were collected from 3 locations & analyzed as per CPCB norms. The soil sampling locations are marked in figure-3.4. The physico-chemical characteristic of these soil samples is given in Table No. 3.1 (xiv).





			<b>Sandy loam</b>	<b>Sandy Loam</b>	<b>Sandy Clay loam</b>
1	Texture	-			
	Sand	%	50.4	54.2	56.8
	Silt	%	28.5	24.6	20.1
	Clay	%	21.1	21.2	23.1
2	pH	-	7.85	7.59	7.42
3	Electrical Conductivity	µmhos/cm	395	265	459
4	Cation exchange capacity	meq/ 100 gm	14.35	13.2	12.54
5	Exchangeable Potassium	meq/ 100 gm	0.28	0.20	0.23
6	Exchangeable Sodium	meq/ 100 gm	0.58	0.51	0.48
7	Exchangeable Calcium	meq/ 100 gm	9.85	9.16	8.96
8	Exchangeable Magnesium	meq/ 100 gm	3.65	3.27	2.91
9	Sodium Absorption Ratio	-	0.71	0.65	0.62
10	Water Holding Capacity	%	28.3	27.6	26.8
11	Porosity	%	35.2	36.7	37.2
12	Permeability	cm/hrs	1.8	1.9	2.0
13	Total kjehdahl Nitrogen	%	0.046	0.039	0.036
14	Phosphorus(Olsen's)	mg/kg	8.9	7.2	5.8
15	Organic Matter	%	0.34	0.30	0.28
16	Bulk Density	gm/cc	1.34	1.32	1.30

**Observations:**

Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.42 to 7.85, which shows that the soil is alkaline in nature. Potassium is found to be from 0.20meq/100 gm to 0.28meq/100 gm. The water holding capacity is found in between 26.6% to 28.3 %.



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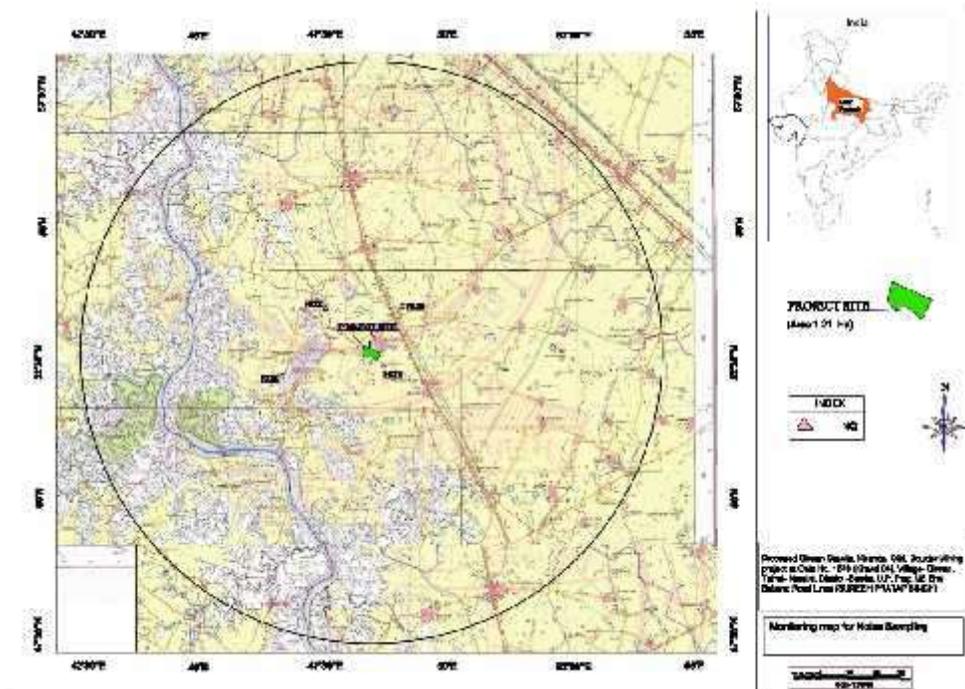
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### 3.1.5 NOISE ENVIRONMENT

The noise levels within the study area were recorded using Sound Level Meter and noise monitoring results were compared with the Ambient Noise Quality Standard notified under Environment Protection Act, 1986. The levels recorded are as stated in Table 3.1 (xvi). The noise level monitoring locations are marked in figure-3.5.

**Table 3.1 (xi): Noise quality monitoring stations**

S.NO.	LOCATION	CODE	DISTANCE AND DIRECTION
1	Project Site	NQ1	320 m in SE
2	Khohi	NQ2	2.90 km in NW
3	MajhgawanSeodha	NQ3	2.28km in NE
4	Barimanpur	NQ4	3.25 km in SW



**Figure – 3.6 Noise quality monitoring location**



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**Table No. 3.1 (xii): Noise level status**

Noise Quality data Oct- Dec,2020						
S.No.	Locations	ZONE	LIMIT (as per CPCB Guidelines),Leq		RESULT (Leq)	
			DAY*	NIGHT*	DAY*	NIGHT*
1	NQ-1	Project site	75	70	54.7	42.6
2	NQ-2	Residential Zone	55	45	54.3	40.8
3	NQ-3	Residential Zone	55	45	53.2	42.3
4	NQ-4	Residential Zone	55	45	48.4	37.9

\* Day Time Leq in dB(A) (6.00AM TO 10.00PM)

\* Night Time Leq in dB(A) (10.00PM TO 6.00AM)

**Results**

Noise monitoring reveals that the maximum & minimum noise levels at day time were recorded as 54.7 dB(A) at NQ-1&48.4 dB(A) at NQ-4 respectively. The maximum & minimum noise levels at night time were found to be 42.6 dB (A) at NQ-1& 37.9 dB(A) at NQ-4 respectively.

There are several sources in the 10 km radius of study area, which contributes to the local noise level of the area. On the commencement of the project, the sound from traffic activities will add to the ambient noise level of the area. This will be kept under check by taking proper suggestive measures.

**3.2 BIOLOGICAL ENVIRONMENT**

This Part of the chapter includes description of Biological Environment.

Banda District comes in Deccan Peninsular area. Vegetation in most



of the district is agriculture, forest area is scattered and is not dense. In Banda district loose sediments as well as black cotton soil is found. Black cotton soil is prominent in the central part. Four major type of soil a) Rakar, b) Mar, c) Kabar and d) Padua are dominant in the district.

**The climate** of the district is characterized by a hot summer and a pleasant winter. The cold season from about middle of November to February is followed by hot season from March to middle of June. The period from mid-June to the end of September is south-west Monsoon season. The average annual rainfall is 902.00 mm. The climate is typical subtropical characterized by long and intense summers. About 80% of the annual rainfall is received from south-west monsoon. The relative humidity is highest in August about 85% and lowest in April. Max Temp: May is the hottest month with mercury shooting upto 47.0 °C  
 Min Temp: January is usually the coldest month with temperature going upto 5.8 °C.

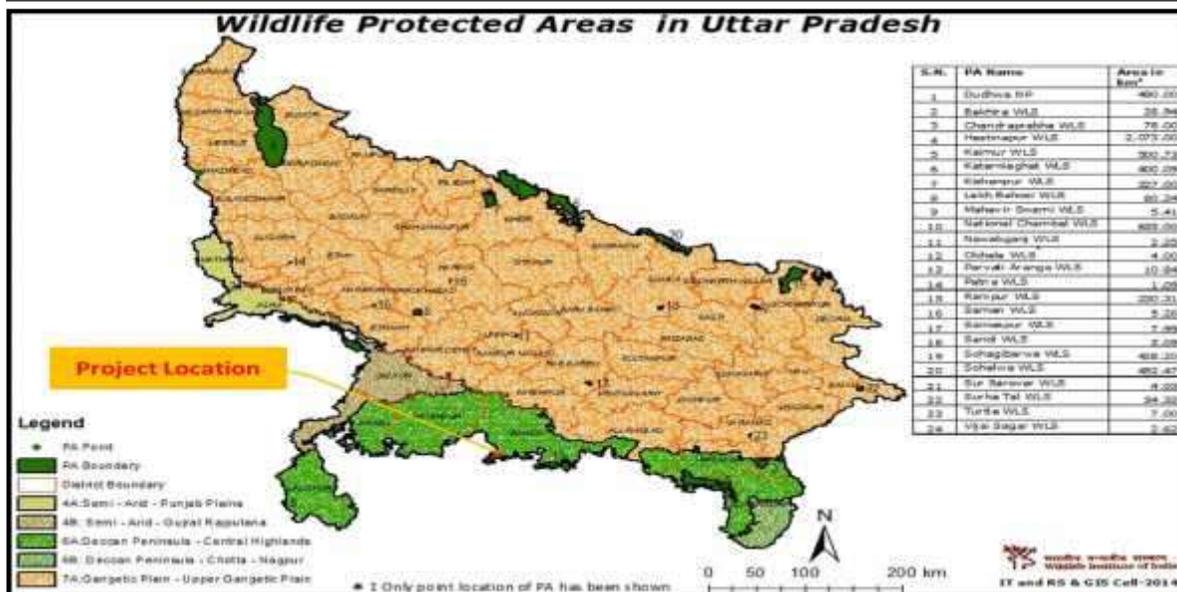
### **Ecosystem Overview**

Majority of the surrounding area is being used as agriculture land. Kharif and Rabi are predominant crops. There is a *Pond* in close proximity of the project (approx. 0.75 km N), River Ken is located approx. 5 km away in southwest direction of the project site.



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**Fig: 3.7 Map showing Project Location on Wildlife Protected Areas in U.P.**

**Methodology for Floral & Fauna study:**

Several field trips of duration ranging from 2 to 10 days were made at regular intervals to various parts. The field notes were taken regularly, included habitat, flora, association and other pertinent features. Efforts were made to identify the plants from the fresh material; those that could not be satisfactorily identified in the field were brought to the laboratory and identified by checking it with monographs, herbarium specimens and other available literature.

Survey sites: project site, few identified locations in 10 km radius

Core zone : At the project area

Buffer zone : 10 km radius surrounding the project area

Site Study : October-November 2020



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**Table 3.2(i): Mode of data collection & parameters considered during the survey**

Aspect	Data	Mode of data collection	Parameters monitored
Terrestrial Ecology	Primary data Collection	Field survey	Floral
	Secondary data collection	From authentic sources like Range office and list of flora fauna obtained from Van Prabhag, Banda, U.P. Published literature, Government Websites and Published Maps	Flora and Fauna diversity and study of vegetation, forest type, importance etc.
River Ecology	Secondary data collection	List of fish fauna obtained from Van Prabhag, Banda, U.P Published literature on fish fauna of the Rivers in the study area, Government Websites	Fish fauna

**General vegetation of the study area:**

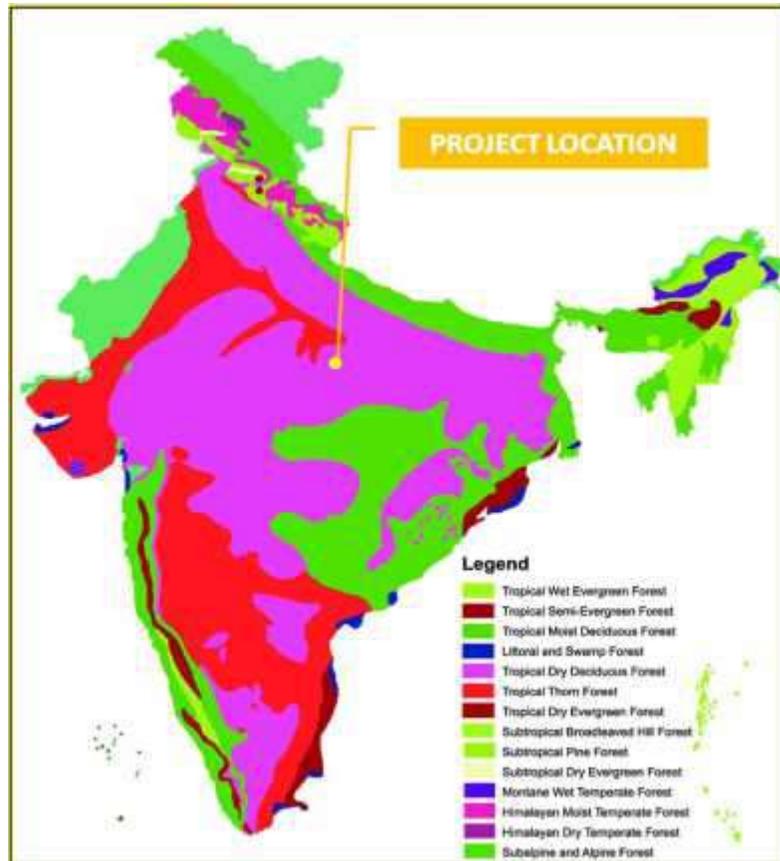
As per Map of India showing distribution of different forest types, classified with reference to Champion and Seth. 1968 (revised ver. 2005), the area falls under sub category of Tropical Dry Deciduous Forest. The annual rainfall is 100-150 cm. The vegetation in Tropical Dry Deciduous forest shed their



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leaves in dry season. The canopy is usually closed, but uneven. The forest cover has few species of deciduous trees rising upto a height of 20 m. There is enough light to reach the ground to permit the growth of grass and climbers as well. Large tract of surrounding area has been cleared for agricultural purposes. The area looks over grazed. Bundhelkhand region is a gently sloping upland distinguished by barren hilly terrain with sparse vegetation.



**Fig: 3.8 Map showing Project Location on Vegetation Classification Map of India**

Buffer area is having different types of plants (herbs, shrubs and trees). Majority among them are mostly tropical elements. Among the tree species *Acacia nilotica*, *Cassia fistula L.*, *DalbergiasissooRoxb*, *FicusbenghalensisL.*, *MangiferaindicaL.*, *Meliaazedarach* etc. are commonly found.

#### **Flora of the Core zone:**

Core zone is slightly rocky with increased elevation up till 8-10m from the adjoining agriculture land. Thus this zone is not adequate for agriculture. The vegetation of the core zone is mainly grasses, weeds, shrubs which are surplus in the area. No ecologically sensitive plant has been reported from this area



**Fig-3.9 Flora of the Core zone**

Among the grasses, *Dactylocteniumaegyptium*, *Echinochloacolona*, *Imperata cylindrical* are very common. The large weeds which infest uncultivated tracts



are aak (*Calotropisprocera*), arind (*Ricinuscommunis*), dhatura (*Daturametel*) and thor (*Opnuntiastricta*). Other noxious weeds and those which appear in crops are pohlior thistle (*Carthamusoxyacantha*), shialkanta (*Argemonemexicana*), and kandyari (*Solanumxanthocarpum*).

**Table 3.2(ii) Flora of the Core Zone**

S.No.	Botanical Name	Common Name	Family Name
<b>HERBS AND SHRUBS</b>			
1.	<i>Calotropisprocera</i>	Aak	Apocynaceae
2.	<i>Capparisdeciduas</i>	Kareel	Brassicaceae
3.	<i>Cassia occidentalis</i>	Chakunda	Fabaceae
4.	<i>Clerodendrumviscosum</i>	Bhat	Lamiacea
5.	<i>Lantana camara</i>	Kuri	Verbenaceae
6.	<i>Ziziphusmauritiana</i>	Gharberi	Rhamnaceae
7.	<i>Chrysopogonfulvus</i>	Kush	Poaceae
8.	<i>Cynodondactylon</i>	Dub	Poaceae
9.	<i>Desmostachyabipinnata</i>	Dab	Poaceae
10.	<i>Imperatacylindrica</i>	Siru	Poaceae
11.	<i>Sporbolusmarginatus</i>	Usari	Poaceae
12.	<i>Partheniumhysterosphorus</i>	Gajarghas	Asteracee

**Flora of the Buffer zone:**

Tropical Dry Deciduous Forests are found in all parts of the plains, and usually in central eastern and western regions. Important trees are Sal, Palas, Amaltas, Bel, fig etc. Neem, Peepal, Sheesham, Mango, Jamun,



Babool, Imli (Tamarind) etc. grow along river banks and in other moist regions.

Buffer zone of the proposed project is mainly agricultural land. The flora of buffer zone comprises of plants growing on the edges of agricultural land, village woodlots and trees planted along the roads. Many tree species are planted in the area because of their usefulness, economic and aesthetic values. Some trees growing along the nalas and rivers. Common tree species observed in the area are Babool (*Acacia nilotica*), Siris (*Albizialebeck*), Aam (*Mangifera indica*), Jamun (*Syzygium cumini*), Bel (*Aegle marmelos*), Tut (*Morus alba*), Bakain (*Melia azedarach*), Bargad (*Ficus bengalensis*), Neem (*Azadirachta indica*), Peepal (*Ficus religiosa*), Safeda (*Eucalyptus umbelatus*), Sisam (*Dalbergia sissoo*), etc.

Weeds like *Argemonemexicana*, *Cenchrusciliaris*, *Heteropogon contortus*, *Lantana camara*, *Parthenium hysterophorus*, etc. are very common. These weeds are affecting the agricultural productivity of the region due to fast growth, short life cycle and enormous production of seeds.

### **Agricultural crops**

The three main cropping seasons in the district are Kharif, Rabi and Zaid. The other crops raised in the district include wheat, paddy, maize, pulses and oilseeds. Main fruits grown are mango and guava. The autumn or Kharif is usually known as siyari, and the spring or Rabi as Unhari. The Zaid or extra harvest is insignificant in this area. Gram, Wheat, Barley, Peas, Arhar and Masoor are the main crops of Rabi. Jowar, Rice, Bajra, Urad, Moong and Moth are the main crops of Kharif. Melon, Water-melon, Bitter gourd and Pumpkin are the main crops of Zaid.



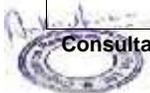
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**Table 3.2(iii) Flora of the Buffer Zone**

**TREES**

<b>S.NO.</b>	<b>Latin name(original)</b>	<b>Regional Name</b>
1.	<i>Acacia Auriculiformis</i>	Akesira/Sonjhari
2.	<i>Alangiumsalviifolium</i>	Akola
3.	<i>Cassia Fistula</i>	Amaltash
4.	<i>TerminaliaAlata</i>	Asna,turha
5.	<i>Lagerstroemia parviflora</i>	Asidh,Ghaudi
6.	<i>Ficusretusa</i>	Ajvain, Kaper
7.	<i>Terminaliaarjuna</i>	Arjun , Kwa, Kahua
8.	<i>Stereospermumsuaveolens</i>	Addhy,Paudal
9.	<i>Ailanthus excelsa</i>	Anjan,arry
10.	<i>Mangiferaindica</i>	Aam
11.	<i>Embelicaofficinalis</i>	Awla/Indian gooseberry
12.	<i>Tamarindusindica</i>	Imli
13.	<i>Syzygiumheyneanum</i>	Kath Jamun
14.	<i>Ficustomentosa</i>	Kath Ber
15.	<i>Pongamiapinnata</i>	Kanji , Karang
16.	<i>Holopteleaintegrifolia</i>	Kanju/Chilibil
17.	<i>Kydiacalycina</i>	Kapsa/Kapsawa
18.	<i>Adina cordifolia</i>	Karam/Haldu
19.	<i>Miliusatomentosa</i>	Kaari



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20.	<i>Acacia Ferruginea</i>	Kaalakeekar
21.	<i>Schleicheratrijuga</i>	Kusum
22.	<i>Feronialimonia</i>	Kenth/Kentha
23.	<i>Phoenix humillis</i>	Kajur
24.	<i>Mimusopshexandra</i>	Khinni/khirni
25.	<i>Acacia catechu</i>	Kher
26.	<i>Lanneacoromandelica</i>	Gurja/Jhingan
27.	<i>Ficusglomerata</i>	Gular
28.	<i>Syzgiumcumini</i>	Jamun/java plum
29.	<i>Tectonagrandis</i>	Teak/Sagon
30.	<i>Diospyrosmelanoxylon</i>	Tendu
31.	<i>Dalbergiapaniculata</i>	Dhobin
32.	<i>Anogeissuslatifolia</i>	Dhaw/Dhwa
33.	<i>Azadiranchtaindica</i>	Neem
34.	<i>Hardwickiabinata</i>	Parsidh/Anjan
35.	<i>Ficuslacor</i>	Paakad
36.	<i>Parkinsoniaaculeata(Retama)</i>	Parkinsonia
37.	<i>Gardenia latifolia</i>	Paapada
38.	<i>Randiaulignosa</i>	Pindar/Bhander
39.	<i>Ficusreligiosa</i>	Peepal/Aswathha tree
40.	<i>PeltophorumPterocarpum</i>	Peltophorum



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41.	<i>Erythrinasuberosa</i>	Farei,Harua
42.	<i>Albiziaodoratissima</i>	Bansa/Bans
43.	<i>Acacia nilotica</i>	Babul
44.	<i>Pterocarpusmarsupium</i>	Bijaysaal/Vijayhara/YuvikaVijaysar
45.	<i>Cassia siamia</i>	VilayatiSeerus
46.	<i>Aeglemarmelos</i>	Bel/Srifal/bili
47.	<i>Callistemon viminalis</i>	Bottle Brush
48.	<i>Zizphusmauritiana</i>	Ber/Beri/Regipandu
49.	<i>Madhucaindica</i>	Mahua
50.	<i>Bauhinia racemose</i>	Mahuli/Jhinjeri/kathmuli
51.	<i>Eucalyptus hybrid</i>	Eucalyptus
52.	<i>Dalbergiasisoo</i>	Seesum/Sheesham
53.	<i>Moringaoleifera</i>	Sahjan
54.	<i>Shorearobusta</i>	Saal/Saakhu/Sakher/Salwa
55.	<i>Nyctanthesarbortristis</i>	Singaru/HarSingar

### Herbs & Shrubs

S.No.	Botanical Name	Common Name
1.	<i>Salanumverbascifolium</i>	Ased
2.	<i>Calotropisprocera</i>	Aak



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3.	<i>Clerodendronphlomidis</i>	Inni
4.	<i>Cassia auriculata</i>	Avaram
5.	<i>Echinopsechinatus</i>	Oont/kataar
6.	<i>Helictresisora</i>	Ainti
7.	<i>Flacourtiaindica</i>	Karia
8.	<i>Cappariszeylanica</i>	Kairyari
9.	<i>Carissa opaca</i>	Karounda
10.	<i>Moghaniachappar</i>	Kasrol
11.	<i>Colebrookeaoppositifolia</i>	Kaala bans
12.	<i>Urgineaindica</i>	Korakand
13.	<i>Grewiaflavescans</i>	Gangruva
14.	<i>Cassia occidentalis</i>	Chakunda
15.	<i>Zizyphusnummularia</i>	Jharberi
16.	<i>Solanumindicum</i>	Bhatkataliya
17.	<i>Lantana camara</i>	Lantana
<b>Grass</b>		
18.	<i>Sachharumspontaneum</i>	Kans
19.	<i>Andropgenpumilus</i>	Gangerua



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20.	<i>Cynodondactylon</i>	Doob
21.	<i>Sorghum halepense</i>	Babru
22.	<i>Erianthusmunja</i>	Munja
23.	<i>Desmostachyabipinnate</i>	Kush
24.	<i>Dichanthiumannulatum</i>	Donda

**Fauna reported in Core zone:**

During the faunal survey in the area no wildlife corridor or movement of animals was recorded from proposed project area. A list of animals of the study area has been prepared on the basis of local inquiry from the village people and from the available published literatures. The animals thus recorded were cross checked with Wildlife Protection Act, 1972 for their schedule.

No bird's habitats like nesting, breeding and forging patterns are noticed in the core zone. Local birds are noticed crossing over the area. No fixed pattern in migratory behavior is noticed.

**Table 3.2 (iv) Fauna of the Core Zone**

Sr. No.	Scientific Name	Common Name	WPA, 1972 (Schedule)
<b>Mammals</b>			
1.	<i>Herpestesedwardsii</i>	Common mongoose	II
2.	<i>Funambuluspennantii</i>	Striped palm	IV

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		squirrel	
3.	<i>Rattusrattus</i>	Common house rat	IV
4.	<i>Musmusculus</i>	House mouse	IV/V
5.	<i>Hystrixindica</i>	Indian porcupine	IV
6.	<i>Suncusmurinus</i>	Chhuchhundar	IV
<b>Reptiles</b>			
7.	<i>Calotesversicolor</i>	Common garden lizard	IV
8.	<i>Hemidactylusflaviviridis</i>	Northern house gaeko	V
9.	<i>Ptyas mucosa</i>	Rat Snake	II
<b>Aves</b>			
10.	<i>Francoleenusfrancoleenus</i>	Black francolin	IV
11.	<i>Galoperdixspadicea</i>	Red spurfowl	IV
12.	<i>Francoleenuspondicerianus</i>	Northern grey partridge	IV
13.	<i>Coturnixcoturnix</i>	Grey Quail	IV
14.	<i>Columba livia</i>	Blue rock pigeon	IV
15.	<i>Gyps fulvus</i>	Griffon vulture	IV
16.	<i>Black kite</i>	Black kite	
17.	<i>Eudynamysscolopaceus</i>	Koel	
18.	<i>Dicrurusmacrocerus</i>	Black Drongo	IV



19.	<i>Motacilla alba</i>	Pied wagtail	IV
20.	<i>Acridotheres fuscus</i>	Jungle Myna	IV
21.	<i>Corvus macrorhynchos</i>	Jungle Crow	IV
22.	<i>Pycnonotus cafer</i>	Red vented bulbul	IV
23.	<i>Amandava amandava</i>	Red munia	IV
24.	<i>Turdoides striata</i>	Jungle babbler	IV
25.	<i>Psittaculakrameri</i>	Rose ringed parakeet	IV

#### **Fauna reported in Buffer zone:**

**Mammal:** Many domesticated mammal species are reported from buffer zone during the field survey. Common domestic animals like Buffalo, cow, goat etc. can be noticed in open grass fields while grazing. Small mammals like Indian palm squirrel and field mouse are noticed in vicinity of the village. Inquiry from village people regarding wild animals reveals that Monkey (*Macacamulatta*), Indian Hare (*Lepus nigricollis*), Nilgai (*Boselaphu stragocamelus*), Mongoose (*Herpestes edwardsii*), etc. are often seen in the area.

**Avifauna:** Pied kingfisher (*Cerylerudis*), Red wattled lapwing etc are noticed. House crow (*Corvus splendens*), House sparrow (*Passer domesticus*), Common hill Myna, Swallow are of common occurrence.

**Reptile:** The reptilian species commonly reported are Agama (*Laudakia tuberculata*) in settlement area, Garden lizard (*Calotes versicolor*) and *Eutropis macularia* along shady places in agricultural field or



where growth of bushes is noticed. Among non-poisonous snakes rat snakes (*Ptyasmucosus*) are commonly noticed in field, followed by poisonous snakes like Cobra (*Najanaja*) and Common krait are occasionally encounter by the farmers.

**Table 3.2 (v): Fauna Of the buffer zone**

**Mammals**

<b>Sr. No.</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>WPA, 1972 (Schedule)</b>
1.	<i>Felischaus</i>	Jungle cat	II
2.	<i>Lutrogaleperspicillata</i>	Smooth Indian Otter	II
3.	<i>Canisaureus</i>	Jackal	II
4.	<i>Cuonalpinus</i>	Indian wild dog	II
5.	<i>Hyena hyena</i>	Striped hyena	IV
6.	<i>Herpestesedwardsii</i>	Common mongoose	II
7.	<i>Boselaphustragocamelus</i>	Blue bull/Nilgai	III
8.	<i>Axis axis</i>	Spotted Deer	III
9.	<i>Cervus unicolor</i>	Sambhar	III
10.	<i>Susscrofa</i>	Indian wild boar	III
11.	<i>Funambuluspennantii</i>	Striped palm squirrel	IV
12.	<i>Rattusrattus</i>	Common house rat	IV
13.	<i>Musmusculus</i>	House mouse	IV/V



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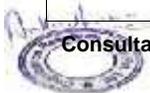
14.	<i>Hystrixindica</i>	Indian porcupine	IV
15.	<i>Lepusnigricollis</i>	Indian hare	IV
16.	<i>Suncusmurinus</i>	Chhuchhundar	IV
17.	<i>Scotophilushindi</i>	Common yellow bat	IV

### Reptiles

S.No.	Scientific Name	Common Name	WPA, 1972 (Schedule)
1.	<i>Lissemyspunctata</i>	Indian flapshell turtle	I
2.	<i>Calotesversicolor</i>	Common garden lizard	IV
3.	<i>Hemidactylusflaviviridis</i>	Northern house gaeko	V
4.	<i>Bungaruscaeruleus</i>	Common Indian krait	IV
5.	<i>Ptyas mucosa</i>	Rat Snake	II
6.	<i>Feranasieboldii</i>	Seniors smooth water snake	IV
7.	<i>Najanaaja</i>	Cobra	I

### Aves

S.No.	Scientific Name	Common Name	WPA, 1972 (Schedule)
1.	<i>Francolenusfrancoleus</i>	Black francolin	IV
2.	<i>Galoperdixspadicea</i>	Red spurfowl	IV



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3.	<i>Francolinus spondicerianus</i>	Northern grey partridge	IV
4.	<i>Coturnix coturnix</i>	Grey Quail	IV
5.	<i>Pavocristatus</i>	Common Peafowl	I
6.	<i>Columba livia</i>	Blue rock pigeon	IV
7.	<i>Streptopelia decaocto</i>	Indian ringed dove	IV
8.	<i>Sarkidiornis melanotos</i>	Comb duck	IV
9.	<i>Anas poecilorhyncha</i>	Spot billed duck	IV
10.	<i>Tadorna ferruginea</i>	Ruddy shelduck	IV
11.	<i>Anser indicus</i>	Bald headed goose	
12.	<i>Gallinago gallinago</i>	Fantail snipe	IV
13.	<i>Egretta garzetta</i>	Little egret	IV
14.	<i>Ardeacinerea</i>	Grey heron	IV
15.	<i>Ciconia episcopus</i>	White necked stork	IV
16.	<i>Bubulcus ibis</i>	Cattle egret	IV
17.	<i>Grus antigone</i>	Saras crane	IV
18.	<i>Gyps bengalensis</i>	Indian whitebacked Vulture	I
19.	<i>Gyps fulvus</i>	Griffon vulture	IV
20.	<i>Black kite</i>	Black kite	
21.	<i>Falco peregrinus</i>	Large Falcon	I



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22.	<i>Sarcoramphus papa</i>	King vulture	IV
23.	<i>Eudynamysscolopaceus</i>	Koel	
24.	<i>Glaucidiumradiatum</i>	Jungle owlete	IV
25.	<i>Strixleptogrammica</i>	Brown wood owl	IV
26.	<i>Alcedoatthis</i>	Common kingfisher	IV
27.	<i>Ocycerosbirostris</i>	Common grey hornbill	I
28.	<i>Dinopiumbenghalense</i>	Lesser Golden woodpecker	IV
29.	<i>Chloropicusxantholophus</i> ),	Large yellow necked woodpecker	IV
30.	<i>Dicrurusmacrocerus</i>	Black Drongo	IV
31.	<i>Motacilla alba</i>	Pied wagtail	IV
32.	<i>Passer domesticus</i>	House sparrow	II
33.	<i>Acridotheresfuscus</i>	Jungle Myna	IV
34.	<i>Corvusmacrorhynchos</i>	Jungle Crow	IV
35.	<i>Corvussplendens</i>	House Crow	V
36.	<i>Ploceusphilippinus</i>	Baya weaver	IV
37.	<i>Pycnonotuscafer</i>	Red vented bulbul	IV
38.	<i>Hirundorustica</i>	Swallow	II
39.	<i>Amandavaamandava</i>	Red munia	IV



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40.	<i>Turdoidesstriata</i>	Jungle babbler	IV
41.	<i>Copsychussaularis</i>	Magpie robin	IV
42.	<i>Psittaculakrameri</i>	Rose ringed parakeet	IV

**Fishes**

S.No.	Scientific Name	Common Name	WPA, 1972 (Schedule)
1.	<i>Labeocalbasu</i>	Karach	-
2.	<i>Chelvaatwar</i>	Chelva	-
3.	<i>MystusAor</i>	Tengra	-
4.	<i>Mystusseenghala</i>	Daryaighoda	-
5.	<i>Cirrhinusmrigala</i>	Nain	-
6.	<i>Anguilla bengalenses</i>	Baam	-
7.	<i>Notopteruschitala</i>	Moy	-
8.	<i>Clairias</i>	Mangur	-
9.	<i>Labeorohita</i>	Rohu	-
10.	<i>Hateropneustesfossilis</i>	Singhi	-
11.	<i>Siloniasilondia</i>	Silonda	-
12.	<i>Pictures ticto</i>	Singhri	-
13.	<i>Channamarulius</i>	Saur	-

**Conclusion:**

No species was reported from the project area (Core Zone) which is listed under Schedule I of Wildlife Protection Act, 1972. However, there are 6



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species which are reported to be present in the buffer zone, these species are abundant in this area and are listed as below:

**Table: 3.2 (vi): Species reported from buffer zone which are listed in Schedule I of WPA, 1972**

S.No.	Scientific Name	Common Name	Habitat
<b>Reptilia</b>			
1.	<i>Lissemyspunctata</i>	Indian flapshell turtle	Found on riverbanks
2.	<i>Najanaaja</i>	Cobra	Common in the area, yet very few times reported from farmland, grassland area. Preserved by locals due to cultural beliefs.
<b>Aves</b>			
3.	<i>Pavocristatus</i>	Common Peafowl	Very common in temperate area. Takes short flights. Carnivorous in nature. Wanders from farms, grassland, on top of trees.
4.	<i>Gyps bengalensis</i>	Indian whitebacked Vulture	Deserts, grassland near water sources. These are scavengers
5.	<i>Falco peregrinus</i>	Large Falcon	Deserts, grassland near water sources. Scavengers
6.	<i>Ocyerosbirostris</i>	Common grey hornbill	Forest and water bodies

### 3.1.7 SOCIO ECONOMIC & ITS BASELINE DATA:



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In this section of the report an attempt has been made to measure Socio-economic impact of the proposed Granite, Khanda, Boulder & gitty mine at Village-Girwan, Tehsil-Naraini, District-Banda, Uttar Pradesh. The various attributes that have been taken into account are population composition, employment generation, occupational shift, household income, consumption pattern, ethnic issue and law & order problem. The key objective of the study is to assess possible impact of the project on socio-economic life of the people in the neighborhood known as study area.

The objectives of the socio-economic impact assessment are as follows:

- a) To collect baseline data of the study area.
- b) To know the socio-economic status of the people living in the study area of the proposed mining project.
- c) To assess the possible impact of the project on socio-economic aspects in the study area.
- d) To measure the impact of the project on Quality of life of the people in the study area.

### **APPROACH & METHODOLOGY**

- e) A mixture of both quantitative and qualitative approach has been adopted in the current socio-economic study.
- f) The study has been conducted based on primary and secondary data. While primary data has been collected through a sample survey of selected households in the study area, the secondary data has been collected from the administrative records of the Government of Uttar Pradesh, Census 2011, district hand books and from the Uttar Pradesh Government portal.
- g) The details regarding population composition, number of literates, workers, etc



have been collected from secondary sources and analyzed. Also village/city/town wise details regarding amenities available in the study area have been collected from secondary sources like Census 2011, and analyzed.

- h) Two stage sampling design has been adopted to select the sampling units. The first stage units are census villages in the rural areas and towns/cities in urban areas. The ultimate stage units are households in the selected villages and towns/cities. Probability sampling has been adopted to select the sampling units.
- i) Estimation of various parameters has been made based on sample data and bottom top approach has been adopted.
- j) On the basis of a preliminary reconnaissance survey, two questionnaires were developed to make it suitable to fulfill the objectives of the study. The questionnaires contained both open ended and close ended questions
- k) The data collected during the above survey was analyzed to evaluate the prevailing socio-economic profile of the area.
- l) Based on the above data, impacts due to mining operation on the community have been assessed and recommendations for improvement have been made.

### CONCEPT & DEFINITION OF TERMS USED

- a) **Study Area:** The study area, also known as impact area has been defined as the sum total of core area and buffer area with a radius of 10 Kilometers from the periphery of the project site. The study area includes all the land marks both natural and manmade, falling therein.
- b) **QoL:** The Quality of Life (QoL) refers to degree to which a person enjoys the important possibilities of his/her life. The 'Possibilities' result from the opportunities and limitations, each person has in his/her life and reflect the interaction of personal and environmental factors. Enjoyment has two



components: the experience of satisfaction and the possession or achievement of some characteristic.

- c) **Household:** A group of persons who normally live together and take their meals from a common kitchen are called a household. Persons living in a household may be related or unrelated or a mix of both. However, if a group of related or unrelated persons live in a house but do not take their meals from the common kitchen, then they are not part of a common household. Each such person is treated as a separate household. There may be one member households, two member households or multi-member households.
- d) **Sex Ratio:** Sex ratio is the ratio of females to males in a given population. It is expressed as 'number of females per 1000 males'.
- e) **Literates:** All persons aged 7 years and above who can both read and write with understanding in any language are taken as literate. It is not necessary for a person to have received any formal education or passed any minimum educational standard for being treated as literate. People who are blind but can read in Braille are also treated as literates.
- f) **Literacy Rate:** Literacy rate of population is defined as the percentage of literates to the total population aged 7 years and above.
- m) **Labour Force:** The labour force is the number of people employed and unemployed in a geographical entity. The size of the labour force is the sum total of persons employed and unemployed. An unemployed person is defined as a person not employed but actively seeking work. Normally, the labour force of a country consists of everyone of working age (commencing from 14 to 16 years) and below retirement (around 65 years) that are participating workers, that is people actively employed or seeking employment. People not counted under labour force are students, retired persons, stay-at home people, people in prisons,



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permanently disabled persons and discouraged workers.

- n) **Work:** Work is defined as participation in any economically productive activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. The work may be part time or full time or unpaid work in a farm, family enterprise or in any other economic activity.
- o) **Worker:** All persons engaged in 'work' are defined as workers. Persons who are engaged in cultivation of land or milk production even solely for domestic consumption are also treated as workers.
- p) **Main Workers:** Those workers who had worked for the major part of the reference period (i.e. 6 months or more in the case of a year) are termed as Main Workers.
- q) **Marginal Workers:** Those workers who did not work for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers.
- r) **Work participation rate:** The work participation rate is the ratio between the labour force and the overall size of their cohort (national population of the same age range). In the present study the work participation rate is defined as the percentage of total workers (main and marginal) to total population.

## **FINDINGS OF THE STUDY**

### **Study Area**

The field investigation has revealed that the entire study area of the proposed mining project is located at Village: Girwan, Tehsil: Naraini, District Banda in Uttar Pradesh. The Sub-district (Tehsil) falling in the study area is Naraini. The study area comprises of 102 villages and there is no urban area.



**BASELINE DATA OF THE IMPACT AREA**

**Table 3.3 Demographic Particulars**

Description	Number	%
Total Population	120873	100
Males	63648	52.66
Females	57225	47.34
Sex ratio (No. of females per 1000 males)	899	
Total Literates	55672	100
Male	37961	68.19
Female	17711	31.81
Total Literacy Rate	58.68	
Male	75.78	
Female	39.55	
Gender gap in literacy rate	36.23	
Total Workers	48859	100
Male	29894	61.18
Female	18965	38.82
Total Main Workers	28176	100
Male	21886	77.68
Female	6290	22.32
Total Marginal Workers	20682	100
Male	8007	38.71
Female	12675	61.29
Total Agricultural Workers	36775	100
Cultivators	23365	63.54
Agricultural Labours	13410	36.46
Male workers in total agricultural workers	21420	58.25
Female workers in total agricultural workers	15355	41.75
Total Household Industrial Workers	4097	100
Male	2122	51.79
Female	1975	48.21
Total Other Workers	7987	100
Male	6352	79.52
Female	1635	20.48



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**Amenities**

S. No.	Amenities	Types	Number
1	<b>Educational Institutions</b>	Primary School	85
		Middle school	35
		Secondary School	7
		Senior Secondary	7
		Adult literacy centre	7
		Other Schools	4
2	<b>Health Institutions</b>	Allopathic Hospital	0
		Ayurvedic Hospital	0
		Homeopathic Hospital	0
		Allopathic Dispensary	0
		Health Centre	0
		Registered Medical	4
		Community Health	25
3	<b>Drinking Water #</b>	Well	98
		Tank	21
		Tube well	18
		tap	42
		Hand pump	102
4	<b>Communication Facilities</b>	Post Office	14
		Telephone	39
5	<b>Transport Facilities#</b>	Bus Service	1
		Railway Service	4



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6	<b>Banking facilities</b>	Commercial bank	36
		Cooperative bank	1
			37
7	<b>Power #</b>		191
		Domestic Power	70
		Power for Agricultural use	56
		Power for other use	37
		Power for all use	28

# No. of villages provided with the facilities

**Source: Census 2011**

### **DEMOGRAPHIC COMPOSITION**

#### **Population**

According to Census 2011, the total population of the study area is 120873. As there is no urban area the entire population belongs to rural area. The overall sex ratio has been worked out to 899 females per 1000 males, which is much lower than the national average of 933 females per 1000 males. Furthermore, around 21.3percent of the total population belongs to Schedule Caste community and the Schedule Tribe population in the study area is very negligible as per Census 2001.

#### **Number of households and household size**

The entire population of the study area has been grouped into 4891 households and the average household size is 7. The household size varies between 5 and 8.

#### **Literacy and Literacy rate**



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The total number of literates in the study area has been worked out around 58.68 percent of the total population. The literacy rate of male has been worked out to 75.78 percent as against 39.55 percent for female, creating a gender gap of 36.23 percent.

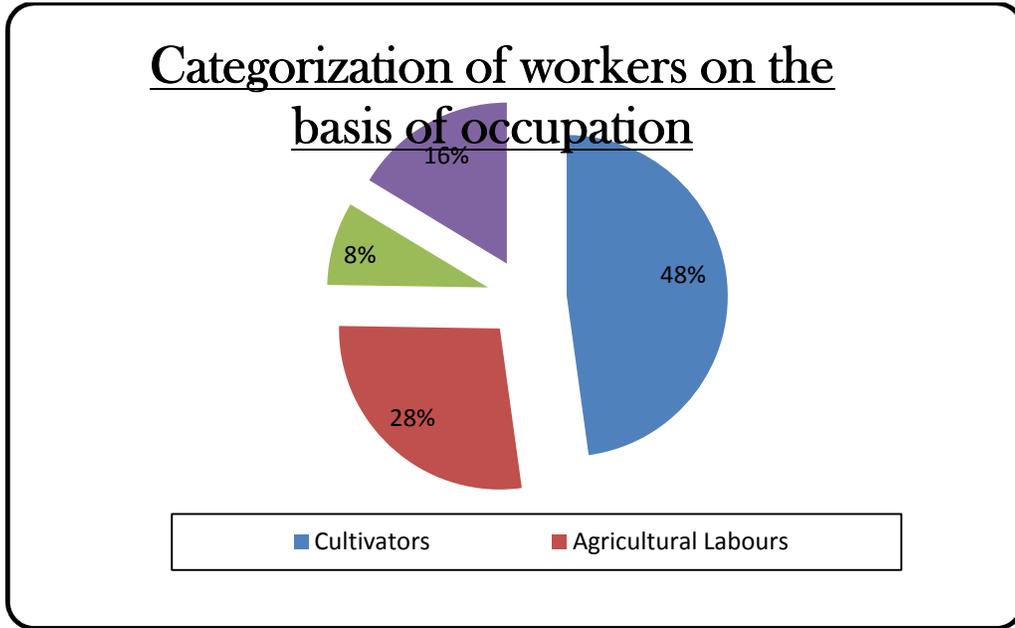
### **Workers and work participation rate**

The total number of workers in the study area is 48859, which is 40.42 percent of the total population. Among the total workers 57.7percent are main workers and the remaining 42.3percent are marginal workers. The percentage of male in the main workers is 77.7percent, while it is only 38.7percent in the case of marginal workers. On the other hand, the percentage share of female in the main workers is only 22.3percent; it is 61.3percent in the case of marginal workers. This indicates that male dominates the both main workers and the marginal workers. The Table and the figure below indicate the categorization of workers based on occupation:

**Table- 3.4 Categorization of workers on the basis of occupation**

<b>S. No.</b>	<b>Worker category</b>	<b>Number of workers</b>	<b>% to total workers</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>1</b> <b>a)</b>	Agricultural Workers	36775	75.26
	<b>b)</b> Cultivators	23365	47.82
	Agricultural labour	13410	27.44
<b>2</b>	Household Industrial Workers	4097	8.39
<b>3</b>	Other workers	7987	16.35

<b>Total</b>	<b>48859</b>	<b>100.0</b>
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**Figure 3.10: Categorization of workers on the basis of occupation**

The share of cultivators in the total workers is 48 percent and that of Agricultural labours is 28 percent. Barely 8 percent of total workers are Household Industrial Workers and 16 percent are ‘Other workers’ which includes white collar workers, professional workers, shopkeepers, traders and businessmen.

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## Chapter-4

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# Anticipated Environmental Impacts And Mitigation Measures

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# CHAPTER-IV



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## CHAPTER-IV

### ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

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## 4.0 GENERAL

All industrial and/or development projects are likely to have an impact on the natural set up of the environment. This impact may be beneficial or adverse, depending on the improvement or the deterioration it brings, about change in the status of air, water, land, ecology, natural systems, socio-cultural life styles and economics of the population. Depending on the nature of activities and baseline environment status, the impacts are assessed for their importance. On the basis of the impact analysis, the mitigating action and future monitoring requirement are paid attention to in the Environmental Management Plan for countering or minimizing the impacts.

Keeping in mind, the environmental baseline scenario as detailed in Section III and the proposed mining activity described in Section II, it is attempted to assess the likely impact and its extent on various environmental parameters and likely mitigation measures to be adopted.

### 4.1 LAND ENVIRONMENT

Various components of land environment have been identified for study of impact of the mine operations. Details of the same are given below:

#### 4.1.1 Solid waste generation and management

No waste or top soil shall be generated during mining activities. All the quantities of Granite, Khanda, Gitty, Boulder to be exploited shall be sending to crusher plant outside the area to crusher plant outside the area. Therefore generation of waste shall be nil & no proposal has been envisaged for its separate dumping.

#### 4.1.2 Impact on land use & reclamation of mined out areas

The area likely to be degraded due to quarrying, pitting & roads. The impact on the land form or physiography will be limited to the modification of the slope. The impact during next five years is

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limited as benches will be formed on the already degrade land. Beside these benches, roads will also modify the physiography. The impact on land use will also be limited. The various modifications due to mining allied & activities during next five years are given below.

Sr. No.	Land use	Agriculture land (ha)	Forest Land (ha)	Waste land (ha)	Grazing Land (ha)
1	Mining pits Quarry	-	-	1.1353	-
2	Approach Road	-	-	0.06	-
3	Dumps	-	-	-	-
4	Office, Rest Shelter etc.	-	-	0.01	-
5	Balance undisturbed land	-	-	0.0047	-
	<b>Total</b>	-	-	<b>1.21</b>	-

## 4.2 WATER ENVIRONMENT

### Anticipated impacts and evaluation

Damage in the water body, depends on its assimilative capacity. To find out assimilative capacity of receiving water body, water samples were collected from different groundwater and surface water sources. The study indicates that assimilative capacity of the River water bodies still exists, but effective measures shall be taken to check water pollution. To find out the effect on ground water an extensive hydro-geological study has been conducted and from the study it can be safely concluded that there is no noticeable adverse effect on surrounding ground water resource due to mining. The mining activity does not require water.



Mining of Granite, Khanda, Gitty, Boulder does not have any significant impact on the water quality and parameters as the mining does not intercept with the ground water level.

In this project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water from the river. There will not be any adverse impact on surface hydrology and ground water regime due to this project. The contractor will adhere to all guidelines and rules for proper and scientific method of mining during the period of extracting the stone. Thus, the project activities shall not have any adverse effect on the physical components of the environment and therefore may not have any effect on the recharge of ground waters or affect the water quality.

### 4.3 AIR ENVIRONMENT

#### Anticipated impacts and evaluation

There is no source of air pollution as no boiler, DG Set or furnace is there. Only source of air pollution is re-suspension dust from drilling, blasting, mechanized loading and the movement of dumpers/trucks to and from the mining site.

Emission of fugitive dust is envisaged due to:

- i. Mining Activities includes excavation and lifting of minerals, drilling, blasting, mechanized loading etc.
- ii. Transportation of minerals will be done by road using trucks. Fugitive dust emission is expected from the transportation of trucks on the haul roads. Evaluation of fugitive dust emission has been done by using line source model as given below:

As the distance inside the mine lease area is minimal and path being boulder laid, no such problem is witnessed.



### Mitigation measures

The mitigation measures like the following will be resorted:

- ) Water sprinkling will be done on the haul roads twice in a day. This will reduce dust emission further by 74% (*Ref. Haul road dust control by WR REED & JA Organiscak*).
- ) Speed limits will be enforced to reduce airborne fugitive dust from vehicular traffic.
- ) Spillage from the trucks will be prevented by covering tarpaulin over the trucks.
- ) Deploying PUC certified vehicles to reduce their emissions.
- ) Proper tuning of vehicles to keep the gas emissions under check.
- ) Monitoring to ensure compliance with emission limits would be carried out during operation.
- ) Plantation activities will be done along the barrier zone and which will reduce the impact of dust in the nearby villages.

## 4.4 NOISE ENVIRONMENT

### Impact on environment

Noise generated at the mine is due to semi-mechanized mining operations, drilling, blasting, mechanized loading and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area.

The noise level in the working environment are compared with the standards prescribed by Occupational Safety and Health Administration (OSHA-USA) which has been adopted and enforced by the Govt. of India through model rules framed under Factories Act, 1980 and CPCB 2000 norms. The summary of the permissible exposures in cases of continuous

noise as per above rules is given below:

**Table 4.1: Noise impact**

<b>Total time of exposure per day in hour</b>	<b>Sound pressure dB(A)</b>	<b>Remarks</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
8.0	90	No exposure in excess of 115 dB(A) is permissible
6.0	92	--
4.0	95	For any period of exposure falling in between any figure and lower figure as indicated in column (1), the permissible sound is to be determined by extrapolation or proportionate scale.
3.0	97	
2.0	100	
1 ½	102	
1	105	
¾	107	
½	110	
¼	115	

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human beings, but when it is abnormally high- it incurs some maleficent effects.

In this case the impact of noise on the nearby settlements is negligible as they are far located from the mine workings.

**a. Mitigation measures**

**i. On-site**

**a) Blasting** only if required will be done by a licensed blaster.

**b) Maintenance of Machinery:** Regular maintenance of machinery will keep the generated noise level below the minimum prescribed limit i.e. not exceeding 90 dB (A) at a distance of 2 m from the machine. All machines will be as per stipulated standards and will be used at their optimum capacity.

**c) Trained Operators:** Only trained operators will be allowed to operate machines during mining to reduce any chance of safety failures.

**d) Vegetation:** Plantation of trees along the barrier zone will be done to dampen the noise, if possible.

**e) Hearing Protection:** All the miners will be provided with Personal Protective Equipments such as ear-muffs.

**f) Phasing out** the old and worn out trucks.

#### **ii. Off-site**

The off-site receptors are not significantly affected as they are located far away from the mine site. But some disturbances due to vehicle movement cannot be avoided. Plantation will be done along the barrier zone and roadsides etc. which will more or less dampen the off-site noise level.

## **4.5 BIOLOGICAL ENVIRONMENT**

### **Impacts on Biodiversity**

Present data have been collected through direct inventory as well as various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre-project biological environmental conditions. There are no endangered species, wildlife sanctuary, wildlife corridors, faunal migratory routes or eco-sensitive area near the whole study area. For this, mine owner planted a good roadside plantation along both side of the mine road.

### **Impacts on agriculture**

The area around the mine lease area is all barren and no agriculture activity is going on atleast 2-3 km away from the mine site. Therefore no

significant impact on the agriculture around the project site is expected.

### **Impacts on aquatic ecology**

Mining activities may result in affecting the riverine ecology by polluting the river water. But in this case, river/canal lies almost 5.0km away from mine site and also nothing is being discharged into the river. However, indiscriminate fishing by labourers etc. may reduce fish stock availability for commercial and sport fishermen. Thus, it is recommended that adequate surveillance measures are implemented during project operation phase to ameliorate such impacts.

### **Mitigation Measures**

There is a requirement to establish a stable ecosystem with both ecological and economic returns. Minimization of soil erosion and dust pollution enhances the aesthetic value of the core and the buffer zone. To achieve this, it is planned to increase the area of green cover of plantation and green belts activities. The basic objectives of plantations are as follows:

- ) Improvement of Soil quality,
- ) Quick vegetative cover to check soil erosion,
- ) Improvement in mining site stability,
- ) Conservation of biological diversity of plants, birds and animals,
- ) As dust receptor and dust filter, this is likely to be produced during mining.
- ) If birds are noticed crossing the core zone, they will not be disturbed at all;
- ) Labors will not be allowed to discards food, plastic etc., which can attract animals/birds near the core site;
- ) Only low polluting vehicles having PUC will be allowed for carrying mining materials.
- ) Noise level will be maintained within permissible limit (silent zone- 50dB (A) during day time or residential zone 55dB (A)) as per noise pollution (regulation and control), rules, 2000, CPCB norms.

#### 4.6 TRAFFIC ANALYSIS

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site and the connecting main roads in the area. Then depending on the capacity of the mine, the number of trucks that will be added to the present scenario will be compared to the carrying capacity.

**Table 4.2 (i): Existing Traffic Scenario & LOS**

Road	V	C	Existing V/C Ratio	LOS
Near village Girwan	250	6000	0.04	A
Near Village Majhgawan Seodha	260	6000	0.04	A
MDR11B intersection	1200	15000	0.08	A

V= Volume in PCU's/hr & C= Capacity in PCU's/ hr

The existing Level of Service is "A" i.e. Excellent

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good
0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 - 1.0	E	Very Poor

**Note:** Capacity as per IRC: 106-1990 Page No. 11 Table-2 for arterial road/ Highways

#### During Mine operation

Total Capacity of mine : 33,880 Tonnes per annum  
 No. of working days : 260 days  
 Per Day Production : 130.307 Tonnes

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Tripper Capacity : 20tonnes

No. of trucks deployed per day : 7 trucks

Considering both loaded & empty trucks

Increase in PCU/day will be 21PCUs

**Table 4.2 (ii): Modified Traffic Scenario & LOS**

Road	V	C	Modified V/C Ratio	LOS
Near village Girwan	271	6000	0.04	A
Near Village MajhgawanSeodha	281	6000	0.04	A
MDR11B intersection	1221	15000	0.08	A

### Results

To manage the traffic from the proposed activity, increased load has been diverted through different routes and it is observed that the level of Traffic will remain same as LOS is "A" that is Excellent. So the additional traffic load on the carrying capacity of the concerned roads is not likely to have any adverse effect.



**Figure-4.1 Haulage Route Map of the Study Area**

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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#### 4.7 OVERALL QUALITATIVE AND QUANTITATIVE IMPACT MATRIX

Table 4.3 (i): Qualitative Matrix

	Nature of Likely Impacts								
	Adverse					Beneficial			
	ST	LT	R	IR	L	ST	LT	SI	N
<b>Air Quality</b>	√				√				
<b>Surface Water Quality</b>	√				√				
<b>Ground Water</b>	*	*	*	*	*				
<b>Land Environment</b>	√			√	√				
<b>Noise</b>	√				√				
<b>Soil</b>	√	*	*	√	*				
<b>Forests</b>					√				
<b>Flora &amp; Fauna</b>	√			√	√				
<b>Agriculture</b>					√				
<b>Socio Economic</b>							√	√	

ST: Short Term LT: Long Term R: Reversible IR: Irreversible

L: Local

SI: Significant

N: Neutral

\*: Negligible

Table 4.3 (ii): Quantitative Matrix

Items	With Project		Without Project
	With EMP	Without EMP	
<b>Air Quality</b>	-2	-8	-6
<b>Surface Water Quality</b>	-2	-4	0
<b>Ground Water</b>	0	-6	0
<b>Land Environment</b>	+8	-2	-8
<b>Noise</b>	-2	-6	-4
<b>Flora</b>	+8	-2	-8
<b>Fauna</b>	-2	-6	0
<b>Agriculture</b>	0	0	0
<b>Socio Economic</b>	+8	+4	0
<b>Total</b>	+16	-30	-26

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#### 4.8 STATUTORY REQUIREMENTS

Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of include *inter alia*, the following:

- ) The Mines Act, 1952
- ) The Mines and Mineral (Development and Regulation) Act, 1957
- ) Mines Rules, 1955
- ) Mineral Concession Rules, 1960
- ) Metalliferrous Mines Regulations 1961
- ) Mineral Conservation and Development Rules, 1988
- ) State Minor Mineral Concession Rules, 1963
- ) The Water (Prevention and Control of Pollution) Act, 1974
- ) The Air (Prevention and Control of Pollution) Act, 1981
- ) The Environment (Protection) Act, 1986
- ) The Forest (Conservation) Act, 1980
- ) The Wildlife (Protection) Act, 1972

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Chapter-5

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**Analysis of Alternative Technology & Site**

# CHAPTER-V

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 CHAPTER-V: ANALYSIS OF ALTERNATIVES

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**CHAPTER-V**

**ANALYSIS OF ALTERNATIVES (TECHNOLOGY & SITE)**

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## 5.0 GENERAL

Examination of alternatives of technology and Site are an utmost important part for assuring that the project has long term sustainability, especially large projects, which involves a lot of money, manpower & their safety and nature, value of minerals & environmental hazards. Stone mining is a very simple operation needing extraction of Stone from area which does not need much mechanization.

Stone mining is a site specific project depending upon the geological set up and mineable portion of area. Hence, there is not much scope for site alternative.

Alternative technologies may be used for the mining operation. No alternative technology has been adopted. This also leads to high employment potential of local habitants. Thus it will have more acceptability and help in socio economic upliftment of the area.

Therefore, the opencast mechanized/semi-mechanized extraction of Granite, Khanda, Gitti & Boulder at the selected site is adopted.

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Chapter-6

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Environmental Monitoring Programme

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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## 6.0 INTRODUCTION

Regular monitoring of the various environmental parameters is necessary to evaluate the effectiveness of the management programme so that the necessary corrective measures can be taken in case there are some drawbacks in the proposed programme. Since environmental quality parameters at work zone and surrounding areas are important for maintaining sound operating practices of the project in conformity with environmental regulations, the post project monitoring work forms part of Environmental Monitoring Program.

Environmental Monitoring Program will be implemented once the project activity commences. Environmental monitoring program includes (i) environmental surveillance, (ii) analysis & interpretation of data, (iii) preparation of reports to support environmental management system and (iv) Organizational set up responsible for the implementation of the programme.

### 6.1 ENVIRONMENTAL MONITORING AND REPORTING PROCEDURE

Monitoring shall confirm that commitments are being met. This may take the form of direct measurement and recording of quantitative information, such as amounts and concentrations of discharges and wastes, for measurement against corporate or statutory standards, consent limits or targets. It may also require measurement of ambient environmental quality in the vicinity of a site using ecological/biological, physical and chemical indicators. Monitoring may include socio-economic interaction, through local liaison activities or even assessment of complaints.

The preventive approach to environment management may also require monitoring of process inputs, for example, type and method used, resource consumption, equipment and pollution control performance etc.



The key aims of environment monitoring are:

1. To ensure that results/conditions are as forecast during the planning stage, and where they are not, to pinpoint the cause and implement action to remedy the situation.
2. To verify the evaluations made during the planning process, in particular with risk and impact assessments and standard & target setting and to measure operational and process efficiency.
3. Monitoring will also be required to meet compliance with statutory and corporate requirements.
4. Finally, monitoring results provide the basis for auditing i.e. to identify unexpected changes.

## 6.2 MONITORING METHODOLOGIES AND PARAMETERS

### Air Quality Monitoring

Air Quality monitoring is essential for evaluation of the effectiveness of abatement programmes and to develop appropriate control measures. Suspended Particulate Matter (SPM), Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Dioxide (NO<sub>2</sub>) will be monitored at the workplace i.e. core zone. The methodology proposed for is shown below:

Parameters	Technique	Technical Protocol
PM <sub>2.5</sub>	Gravimetric method	<b>CPCB Guideline Vol. I May' 2011</b>
PM <sub>10</sub>	Gravimetric method	<b>IS 5182 (Part-XXIII)</b>
Sulphur Dioxide	Improved West and Gaeke	<b>IS-5182 (Part-II)</b>
Nitrogen Dioxide	Modified Jacob & Hochheiser	<b>IS-5182 (Part-VI)</b>

### **Water Quality monitoring**

Water quality monitoring involves periodical assessment of quality of surface water and the ground water near the mining project.

- ) Surface water samples will be analyzed for all the parameters as per EPA, 1986
- ) Ground water samples will be analyzed for all the parameters as per IS-10500.

### **Soil Quality monitoring**

The soil quality monitoring is carried out to assess the soil characteristic. The soil quality will be analyzed as per CPCB norms.

### **Noise Level Monitoring**

Noise level monitoring will be done for achieving the following objectives:

- a) To compare sound levels with the values specified in noise regulations
- b) To determine the need and extent of noise control of various noise generating sources

Noise level monitoring will be done at the work zone to assess the occupational noise exposure levels. Noise levels will also be monitored at the noise generating sources like mineral handling arrangements, vehicle movements and also at the nearest village for studying the impact due to higher noise levels for taking necessary control measures at the source.

### **Socio-economic Survey**

Socio economic condition will be monitored to assess the demographic particulars of the area including the impacts on the social & economical condition on the residents nearby.



### Plantation Monitoring Programme

Plantation monitoring will be done to ensure survival & growth rate of plantations.

### 6.3 MONITORING SCHEDULE

The schedule has been shown below for the parameters proposed for monitoring.

**Table 6.1-Monitoring Schedule and Parameters**

S.No.	Description of Parameters	Schedule of Monitoring
1	Air Quality	24 hourly samples twice a week in each season except monsoon
2	Water Quality (Surface & Groundwater)	Once a season for 4 seasons in a year
3	Soil Quality	Once in a year in project area
4	Noise Level	Twice a year for first two years & then once a year
5	Socio-economic Condition	Once in 3 years
6	Plantation monitoring	Once in a season

### 6.4 MONITORING SCHEDULE - IMPLEMENTATION

An implementation programme has been prepared as it serves no purpose if it is not implemented in letter and spirit.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management should strengthen the existing control measures as elaborated earlier in this report and monitor the efficacy of the control measures implemented within the mining area relating to the



following specific areas:

- a) Collection of air and water samples at strategic locations with frequency suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.
- b) Collection of soil samples at strategic locations once every two years and analysis thereof with regard to deleterious constituents, if any.
- c) Measurement of water level fluctuations in the nearby ponds dug wells and bore wells and to assess if mining has got any impact on it or not.
- d) Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done twice a year for first two years and thereafter once a year.
- e) Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people should also be involved.

An Environmental Management Cell (EMC) is envisaged which will be responsible for monitoring EMP and its implementation. EMC members should meet periodically to assess the progress and analyze the data collected during the month.

### 6.5 BUDGET ALLOCATION FOR MONITORING

The EMC will be responsible to carry on the monitoring. Budget allotment has also been proposed for the same:

**Table 6.2- Budget allotted for Environmental Management Plan**

SI. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1	Pollution Control Dust Suppression		2,08,000

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2	Pollution Monitoring		
	i) Air pollution	--	30,000
	ii) Water pollution	--	20,000
	iii) Soil Pollution	--	30,000
	iv) Noise Pollution	--	20,000
3	Green belt development	1,20,000	30,000
4	Haul road maintenance	--	30,000
5	CER Cost (Included in EMP Cost as per OM dated 30 Sep 2020)	1,20,000	
<b>Total</b>		<b>2,40,000</b>	<b>3,68,000</b>

### 6.6 REPORTING SCHEDULES OF THE MONITORING DATA

It is proposed that voluntary reporting of environmental performance with reference to the EMP should be undertaken. The environmental monitoring cell shall co-ordinate all monitoring programmes at site to furnish the data to the State regulatory agencies regularly in respect of the stipulated prior environmental clearance terms and conditions.

The proponent shall prominently advertise in the newspapers indicating that the project has been accorded environmental clearance and also the details of website where it is displayed.

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**Chapter-7**  
**Additional Studies**

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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# CHAPTER-VII



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**ADDITIONAL STUDIES**

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## 7.0 PUBLIC CONSULTATION

As per the appendix IV of EIA Notification 2006 & ToR issued by SEIAA UP, public Hearing/consultation was held on 11/08/2021 under the chairmanship of Additional District Magistrate, Banda. In Public Hearing local persons participate & raise their issues & concern in the environmental impacts of the project. Proper video recording was done for this meeting.

The Public Hearing was arranged by the Regional office of State Pollution Control Board (SPCB).

**Table no.-7.1 Public Hearing Detail**

Particular	Description
Advertisement for Public Hearing Date of Advertisement in Newspapers Name of Newspapers	9/07/2021, The Indian Express Rashtria Sahara
Date of Public Hearing	11.08. 2021
Venue	Tehsil- Naraini meeting hall District- Banda, State-U.P
Members	<ul style="list-style-type: none"> <li>) Shri Santosh Bahadur Singh Additional District Magistrate, District-Banda</li> <li>) Smt.Vandita Shrivastav Additional District Magistrate, Tehsil- Naraini, District-Banda</li> <li>) Shri Iswar Chandr, Mining officer, Geology &amp; Mining Department, Banda</li> <li>) Shri Ramdas, Assistant Scientist, UPPCB, Banda</li> <li>) Dr. Madhvi Kamalvanshi , Assistant Scientist, UPPCB, Banda</li> </ul>

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## 7.1 Public hearing proceeding



### उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

क्षेत्रीय कार्यालय: 34ए, निकट संत तुलसी पब्लिक स्कूल, गेट नं०-2,  
इन्दिरा नगर, चिल्ला रोड, बाँदा

सन्दर्भ सं०. १७५/सि.क. सुनवाई /2021

Date: 16/08/21

सेवा में,

राज्य सचिव,  
उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड,  
लखनऊ

विषय: मैसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवा, तहसील नरैनी, जनपद-बाँदा उत्तर प्रदेश के क्षेत्रफल 1.21 हे०. (क्षमता 12,100.00 घन मी०/वर्ष) में अवयस्क खनिज ग्रेनाइट, खण्डा, गिट्टी एवं बोल्टर के खनन पट्टे हेतु परियोजना की पर्यावरणीय स्वीकृति हेतु दिनांक 11.08.2021 को तहसील-नरैनी सभागार, जनपद-बाँदा (उत्तर प्रदेश) में आयोजित लोक सुनवाई का कार्यवृत्त के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक बोर्ड मुख्यालय के पत्र सं०- एच82403/सी-2/एनओसी-4709 /21 दिनांक 16.06.2021 का सदर ग्रहण करने का कष्ट करें। जिसके अनुपालन में उपरोक्त सदरमित अवयस्क खनिज ग्रेनाइट, खण्डा, गिट्टी एवं बोल्टर खनन परियोजना की पर्यावरणीय स्वीकृति हेतु लोकसुनवाई स्थल तहसील-नरैनी सभागार, जनपद-बाँदा (उत्तर प्रदेश) में दिनांक 11.08.2021 को आयोजित करायी गई। उक्त लोकसुनवाई की कार्यवृत्त (मूलरूप में) उपस्थिति के विवरण की छायाप्रति तथा सी०डी० की दो प्रतियाँ पत्र के साथ संलग्न कर आवश्यक कार्रवाई हेतु सादर प्रेषित हैं।

संलग्नक: उपरोक्तानुसार।

भारतीय

(घनश्याम)

क्षेत्रीय अधिकारी

प्रतिलिपि मुख्य पर्यावरण अधिकारी (वृत्त-2), उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड लखनऊ को सूचनाार्थ सादर प्रेषित।

क्षेत्रीय अधिकारी

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मेसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बोंदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) में अवयस्क खनिज ग्रेनाइट, खण्ड, गिट्टी एवं बोल्टर के खनन पट्टे हेतु परियोजना की पर्यावरणीय स्वीकृति हेतु दिनांक-11.08.2021 को तहसील-नरैनी समागार, जनपद-बोंदा (उ०प्र०) में आयोजित लोक सुनवाई का कार्यवृत्त :-

उपरोक्त संदर्भित खनन परियोजना की पर्यावरण स्वीकृति प्राप्त करने विषयक परियोजना प्रस्तावक श्री सुरेश प्रताप सिंह, नि०-ग्राम व पौरट मऊ, 884, कटरा, लालगज, तहसील-गीरीगंज, जनपद-अमेठी (उ०प्र०) के आवेदन पत्र मेसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बोंदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) पर सम्यक विचारोपरान्त बोर्ड के पत्र संख्या-एच62403/सो-2/एनओसी-4709/21 दिनांक 18.06.2021, जो कि जिलाधिकारी, जनपद-बोंदा को सम्बोधित तथा क्षेत्रीय अधिकारी उ०प्र० प्रदूषण नियंत्रण बोर्ड, बोंदा एवं अन्य को पृष्ठांकित है, के निर्देशों के अनुपालन में क्षेत्रीय अधिकारी उ०प्र० प्रदूषण नियंत्रण बोर्ड, बोंदा के अनुरोध पर जिलाधिकारी, जनपद-बोंदा द्वारा दिनांक 11.08.2021 को अपराह्न 12.00 बजे तहसील-नरैनी समागार, जनपद-बोंदा (उ०प्र०) नियत की गई थी। पर्यावरण एवं वन मंत्रालय भारत सरकार द्वारा पर्यावरण (संरक्षण) अधिनियम 1986 धारा-3 की उपधारा (1) (2) के खण्ड अ के अन्तर्गत पर्यावरण समाघात निर्धारण अधिसूचना संख्या- एस०ओ०-1533 दिनांक 14.09.2006 एवं यथा संशोधित में वर्णित प्राविधानों के अन्तर्गत नियत दिनांक से एक माह पूरा दैनिक समाचार पत्र "राष्ट्रीय सहारा" (हिन्दी) के कानपुर अंक एवं दैनिक समाचार पत्र "दि इण्डियन एक्सप्रेस" (अंग्रेजी) के लखनऊ के अंक में दिनांक 09.07.2021 को प्रकाशित करायी गयी थी।

आज दिनांक 11.08.2021 को जिलाधिकारी महोदय, बोंदा द्वारा नागित अपरजिलाधिकारी (वि०/रा०) द्वारा मौखिक निर्देशानुसार उपजिलाधिकारी, नरैनी की अध्यक्षता में पर्यावरणीय लोक सुनवाई का आयोजन तहसील-नरैनी समागार, जनपद-बोंदा (उ०प्र०) में किया गया। उक्त लोक सुनवाई में मुख्य रूप से निम्न सदस्य उपस्थित रहे-

1. श्री सतीश बहादुर सिंह, अपरजिलाधिकारी (वि०/रा०), अध्यक्ष लोक सुनवाई जनपद-बोंदा।
2. श्रीमती वंदिता श्रीवास्तव, उपजिलाधिकारी, तहसील-नरैनी, जनपद- बोंदा।
3. डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बोंदा।
4. श्री ईश्वर चन्द्र, खान निरीक्षक, खनिज विभाग, बोंदा।
5. श्री रामदत्ता, वैज्ञानिक सहायक, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बोंदा।
6. श्री दीपक कुमार शुक्ल, परामर्शी मेसर्स जाग्नीजैस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०)।

अन्य उपस्थित सदस्यों की उपस्थिति की छायाप्रति संलग्न है।

डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बोंदा द्वारा लोक सुनवाई के सम्बन्ध में उपस्थित जनसमुदाय को अवगत कराया गया कि उक्त परियोजना में (खण्डाज, गिट्टी एवं बोल्टर) बिस्मिड मैटेरियल खनन कार्य हेतु गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बोंदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) में प्रस्तावित है।

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उपरोक्त अधिसूचना में वर्णित प्राविधानों के अनुसार किसी भी खनन परियोजना को प्रारम्भ करने से पूर्व उ०प्र० सरकार द्वारा गठित स्टेट इनवायरमेन्ट इम्पैक्ट अस्सिसमेन्ट अथॉरिटी से पर्यावरणीय स्वीकृति प्राप्त किया जाना अनिवार्य है। उक्त प्रस्तावित परियोजना को पर्यावरणीय स्वीकृति निर्गत करने के पूर्व खनन क्षेत्र के आस-पास लोकसुनवाई आयोजित किया जाना प्रविवानित है परन्तु प्रमुख सचिव, उ०प्र० शासन, पर्यावरण अनुभाग-2, लखनऊ के पत्र सं० 510-532/55 पर्या-2-2018-103(पर्या)/2007 दिनांक 23.04.2018, पर्यावरण अनापत्ति के प्रकरणों में त्वरित कार्यवाही से सम्बन्धित निदेशक, भूतत्व व खनिकर्मा निदेशालय, उ०प्र० लखनऊ के पत्र सं० 1133/एम०/21(पर्या)/2011(II) दिनांक 07.09.2021 के अनुसार एक तहसील के क्षेत्रों पर तहसील मुख्यालय समेकित सुनवाई को कराये जाने का उल्लेख किया गया है। प्रस्तावित परियोजना के सम्बन्ध में जिलाधिकारी जनपद बोंदा के पत्र संख्या 2338/खनिज-30, बोंदा दिनांक 06.10.2020 के द्वारा सहमति पत्र (लेटर ऑफ इन्टेंट) सशर्त निर्गत किया गया है, इसके अतिरिक्त उपरोक्त सम्बन्धित प्रस्तावित परियोजना को राज्य स्तरीय पर्यावरण प्रभाव निर्धारण प्राधिकरण समिति उ०प्र० में प्रस्तुतिकरण के पश्चात् पत्र संख्या-831/Paryā/SEAC/6104/2019 दिनांक 22.03.2021 टर्म्स ऑफ रिफरेंस (टॉर) प्रदान किया गया है। इसके अतिरिक्त यह भी अवगत कराया गया कि पट्टेधारक द्वारा गैरसो कान्नीजेंस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०) को परामर्शी नियुक्त किया गया है तथा परियोजना से सम्बन्धित पर्यावरणीय प्रभाव मूल्यांकन एवं पर्यावरणीय प्रबंधन योजना बोर्ड में प्रस्तुत की गई है, जिसकी एक-एक प्रति उपरोक्त सन्दर्भित अधिसूचना में वर्णित प्राविधानों के अन्तर्गत जिलाधिकारी कार्यालय बोंदा, जिला उद्योग केन्द्र बोंदा, एवं जिला पंचायत बोंदा के कार्यालयों में जनता के सुझाव, विचार, टीका-टिप्पणी प्रेषित करने हेतु उपलब्ध करायी गयी। उक्त परियोजना के सम्बन्ध में उपस्थित जनसमुदाय को विस्तृत विवरण से अवगत कराने हेतु सहायक वैज्ञानिक अधिकारी द्वारा बैठक में उपस्थित परामर्शी से आग्रह किया गया।

परामर्शी मैसर्स कान्नीजेंस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०) के प्रतिनिधि श्री दीपक शुक्ला द्वारा अवगत कराया गया कि प्रस्तावित परियोजना गाटा नं०-1876, खण्ड न०-04, ग्राम-गिरवा, तहसील-नरैनी, जनपद- बोंदा उ०प्र० की है। प्रस्तावित खनन खुली खान अर्द्ध-यांत्रिक प्रक्रिया के दौरान किया जायेगा। वर्षा ऋतु में खनन कार्य पूर्ण रूप से प्रतिबन्धित है तथा खनन कार्य दिन में ही किया जायेगा। खण्डा, गिट्टी एवं बोल्टर अर्द्ध-यांत्रिक प्रक्रिया से एकत्रित किया जायेगा तथा वाहन में सेमी मैकेनाइज्ड विधि द्वारा लोड किया जायेगा। पर्यावरण प्रबंधन योजना प्रभाव क्षेत्र को ध्यान में रखकर बनायी गयी है। परियोजना में किसी भी प्रकार का निर्माण कार्य नहीं किया जायेगा। प्रस्तावित परियोजना के लिये निकटतम ग्रामवासियों द्वारा ही मजदूरी ली जायेगी परन्तु एक अस्थाई कार्यालय का निर्माण किया जायेगा। जिसमें कार्य करने वाले मजदूरों के लिए समुचित व्यवस्था (जलपान गृह, विश्रामालय, टॉयलेट एवं फस्टेण्ड की व्यवस्था इत्यादि) की जायेगी।

परामर्शी द्वारा अवगत कराया गया कि उक्त खनन राजकीय एवं निजी निर्माण हेतु प्रयोग किया जाता है, परन्तु भारत सरकार द्वारा वर्णित प्राविधानों के अन्तर्गत किसी भी खनन कार्य से पर्यावरण पर पड़ने वाले प्रभावों को यथासंभव कम करने हेतु पर्यावरणीय प्रबंधन योजना तैयार कर प्रस्तुति की जानी होती है। ध्वनि एवं वायु प्रदूषण नियंत्रण हेतु उक्त परियोजना में कार्य करने वाले श्रमिकों को प्रशिक्षण देकर यह सुनिश्चित किया जायेगा कि उक्त परियोजना से पर्यावरण प्रभावित न हो। परियोजना के शुरू होने से आस पास के क्षेत्रों के भौतिक आधारभूत संरचना में सुधार होगा



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(जैसे बेहतर सड़क, पेयजल सुविधाओं में सुधार, बाजार स्थान और अन्य) प्रस्तावित परियोजना में सरकार को सौचली प्राप्त होगी। यही ओपन कास्ट अर्द्ध मशीनरीकृत खनन किया जायेगा। प्रस्तावित परियोजना में कार्य करने वाले समस्त श्रमिकों के स्वास्थ्य की पूर्ण जिम्मेदारी पददेधारक की होगी तथा परियोजना के प्रारम्भ होने पर निकटतम ग्रामवासियों को रोजगार की प्राप्ति होगी। खनन कार्य के परिवहन हेतु ट्रकों के आवागमन से उत्पन्न धूल के नियंत्रण हेतु परियोजना में जल छिड़काव की व्यवस्था का प्राविधान किया गया है। पददेधारक द्वारा समय-समय से पानी का छिड़काव किया जायेगा। परामर्शी द्वारा अवगत कराया गया कि मात्र क्लारिस्टिंग का कार्य मध्य रात्रि में किया जायेगा। ध्वनि प्रदूषण के नियंत्रण हेतु ट्राहन चालकों को अनावश्यक प्रेशर हार्न का प्रयोग न करने हेतु निर्देश दिये जायेंगे। खनन कार्य दिन के समय ही किया जायेगा। सरथा द्वारा जल/वायु एवं ध्वनि आदि से सम्बन्धित नमूने एकत्रित किये गये हैं। विश्लेषण के उपरान्त प्रचालक केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी मानकों के अनुरूप पाये गये हैं।

परामर्शी द्वारा यह अवगत भी अवगत कराया गया कि पर्यावरण एवं वन मंत्रालय, भारत सरकार के पर्यावरण आंकलन अधिसूचना-2006 के अनुसार खनन पट्टे के संचालन से पूर्व पर्यावरणीय क्लीयरेंस लेना जरूरी है इसलिए अभी तक खनन पट्टे का संचालन तबित है। इस विषय में सम्बन्धित परियोजना की आई ए/ईओएमपी0(ड्राफ्ट) को फील्ड मॉनीटरिंग और एकत्रित सेक्रेण्डरी आंकड़ों के आधार पर तैयार किया गया है।

उपरोक्त के उपरान्त डॉ० माधवी कमलवती, सहायक वैज्ञानिक अधिकारी, बोंदा द्वारा लोक सुनवाई के समय उपस्थित ग्रामवासियों से अपने अपने शिकायते/आपत्तिया/सुझाव आदि प्रस्तुत किये जाने हेतु आमंत्रित किया गया।

सर्वप्रथम श्री ऋषि अवरधी, ग्राम गिरवा, जनपद-बोंदा द्वारा सुझाव दिया गया कि खनन कार्य के समय धूल नियंत्रण हेतु व्यवस्था की जाये, अवैध खनन न किया जाये एवं खनन के समय अत्यधिक ध्वनि प्रदूषण होता है जिसके नियंत्रण हेतु व्यवस्था की जाये ?

परामर्शी श्री दीपक शुक्ला द्वारा अवगत कराया गया कि खनन का कार्य ग्रामवासियों द्वारा ही लिया जायेगा तथा खदान में खनन नीति/साइनिंग प्लान के अनुसार ही खनन कार्य किया जायेगा, खनन कार्य से उत्पन्न धूल के नियंत्रण हेतु जन का छिड़काव तथा खदान के आस-पास, पर्यावरण के संरक्षण हेतु वृक्षारोपण किया जायेगा एवं ध्वनि प्रदूषण को नियंत्रण किये जाने हेतु अधिकतम खनन कार्य दिन में किया जायेगा एवं कंट्रोल क्लारिस्टिंग की जायेगी जिससे आस-पास के ग्रामवासियों को ध्वनि सम्बन्धी कोई समस्या न हो।

तत्पश्चात् पददेधारक श्री सुरेश प्रताप सिंह द्वारा ग्रामवासियों को आश्वासन दिया गया कि सरकार बनाये गई नियमावली के मानकों के अनुसार ही खनन कार्य किया जायेगा एवं ग्रामवासियों द्वारा जो समस्याएं बतायी गई हैं उनका समय से निस्तारण किया जायेगा एवं ग्रामवासियों द्वारा दिये गये सुझावों पर भी विचार किया जायेगा, तथा मेरे द्वारा यह प्रयास किया जायेगा कि खनन संचालन के समय ग्रामवासियों को किसी भी प्रकार की समस्या न हो तथा निकटतम ग्रामवासियों द्वारा कार्यक्षमता के अनुसार रोजगार उपलब्ध कराया जायेगा। वृक्षारोपण कराया जायेगा तथा सी0ई0आर0 के अन्तर्गत ग्राम विकास के कार्य किये जायेंगे तथा पर्यावरण संरक्षण हेतु नियमानुसार कार्य किये जायेंगे एवं ड्राफ्ट इन्वायमेंट इम्पैक्ट असेसमेंट एण्ड इन्वायमेंट मैनेजमेंट प्लान में प्रेषित की गई प्रस्तावना में शर्तों का पूर्णतः अनुपालन किया जायेगा तथा ईआईए रिपोर्ट में लिखित रूप में प्रशासन

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को जमा की गयी है तथा ग्रामवासियों को किसी भी प्रकार की समस्या होने पर उनकी समस्याओं का निस्तारण किया जायेगा।

उपजिलाधिकारी, नरैनी द्वारा ग्रामवासियों को अवगत कराया गया कि गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवा, तहसील-नरैनी, जनपद-बौदा उ०प्र० के क्षेत्रफल 1.21 हे०. (क्षमता 12,100.00 घन मी०/वर्ष) खनन क्षेत्र की जो प्रस्तावना प्रस्तुत की गयी है उसमें यदि आपको कोई शिकायत या सुझाव है तो आप अपना पक्ष रख सकते हैं तथा साथ ही सी०ई०आर० के अन्तर्गत प्रस्तुत प्रस्तावना के अनुसार पर्यवेक्षक द्वारा सभी कार्य समयानुसार किये जायेंगे एवं ग्रामवासियों को प्राथमिकता के आधार पर रोजगार उपलब्ध कराया जाये। साथ ही ग्रामवासियों को यदि बाद में भी पट्टे संचालन के समय कोई भी समस्या होती है तो उनके द्वारा उपजिलाधिकारी, खान अधिकारी, एवं शासन-प्रशासन को सूचना दी जा सकती है तथा ग्रामविकास हेतु नियमानुसार खनिज निधि के अनुसार कार्य किया जायेगा, उक्त स्थल पर तार फेंसिंग अवश्य कराये एवं पर्यावरण संरक्षण हेतु अधिक से अधिक वृक्षारोपण किया जाये एवं प्रत्येक 6 माह में कम्प्लायंस रिपोर्ट जमा करनी होगी।

डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी द्वारा ग्रामवासियों को पर्यावरण संरक्षण हेतु पालीथिन का प्रयोग न किया जाना, अत्यधिक वृक्षारोपण किया जाना, हार्न का अनावश्यक न बनजे दिया जाना, ब्लास्टिंग मानदण्डों का कड़ाई से पालन करना आदि सुझाव दिये गये। अन्त में उपस्थित जनसमुदाय का आभार प्रकट करते हुए उपजिलाधिकारी नरैनी से लोकसुनवाई के समापन हेतु आवश्यक अनुमति प्राप्त कर लोक सुनवाई के समापन की घोषणा की गयी।

  
(डॉ० माधवी कमलवंशी)  
सहायक वैज्ञानिक अधिकारी,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
बौदा।

  
(विदिता श्रीवास्तव)  
उपजिलाधिकारी, तहसील-नरैनी,  
जनपद-बौदा।

  
(संतोष बहादुर सिंह)  
अपर जिलाधिकारी (वि०/रा०)  
जनपद-बौदा।

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**Table no.-7.2 Details of Action Plan for the Issues Rise during the Public Hearing**

Sr. No	Name	Questions asked by Citizens/ Members	Reply by Consultant/ ADM/RO
01	Shri. Rishi Awasthi Village- Girwan, District- Banda	He suggested during operation to control dust pollution, illegal mining should not be done and during mining noise pollution occur for which control measure should be adopted	<p>Technical consultant replied that villagers will be employed for mining and mining will be done according to mining rules /mining plan. To control dust pollution occur due to mining, water sprinkling will be done and plantation will be done for environment protection near mining lease area. To control noise pollution, control blasting will be done &amp; mining will be done in day time only. Problem of noise pollution villagers will do not face.</p> <p>Afterwards proponent Shri Suresh Singh gives assurance to villagers that mining will be done according to govt. rules. The issue raise by villagers will be solved by time and suggestion given by villagers will be consider. I will try that during mining operation villagers do not face any problem and villagers get employment. Tree plantation will be done &amp; under CER scheme village development work will be done.</p>



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			<p>All condition mention in EIA Report will be follow &amp; if villagers have any issue then it will be resolve as soon as possible.</p> <p>Additional District Magistrate, Naraini aware the villagers if they have any complain &amp; suggestion about gata no.1876, khand-04, village-Girwan, Tehsil- Naraini, District- Banda, Utttar Pradesh. Area- 1.21Ha (production- 12100m<sup>3</sup>/yr) can give their opinion. All activities under CER Scheme will be done on time. Villagers will be given employment on priority basis. If villagers have any issue after commencement of mining operation then they could be inform to ADM, mining officer and govt. office. Mining will be done according to mining rules for village development. Proper fencing of lease should be done and for environment protection maximum number of trees will be planted. Every 6 month compliance report should be given.</p> <p>Dr. Madhvi Kamalvanshi, Assistant Scientist, UPPCB, Banda inform to villagers for environment protection polythene should not be used, maximum plantation will be done, ban of unnecessary</p>
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			honking of horn, and follow the rules of blasting parameter etc. suggested.
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## 7.1 RISK ASSESSMENT

Human health and Environmental risk from developmental activities is mainly due to occurrence of some accident consisting of an event or sequence of events like explosion, fire and toxic hazards. Risk analysis provides a numerical measure of the risk that a particular facility poses to the public. It begins with the identification of probable hazardous events at an operational area and categorization as per the predetermined criteria. The consequences of major events or accidents are calculated for different combinations of weather conditions to stimulate worst possible scenario. These predictions of consequences are combined to provide numerical measures of the risk for the entire facility. Risk assessment should be done on the basis of past accident analysis at similar projects, previous judgments and expertise in the field of risk analysis especially in accident analysis.

## 7.2 DISASTER MANAGEMENT AND RISK ASSESSMENT:

Maximum depth of working has been concentrated 24m (average). There is no problem of ground water/ surface water. No causes of disaster have been apprehended during mining activity, but possibility of disaster cannot be ruled out. Therefore all the statutory precautions shall be undertaken into account as per mines act.1952, mines rules 1955, MMR 1961.

Disaster management plan is comprehensive and structured system for ensuring the prevention of risks/ disasters involved. The principles used to priorities work are as follows.



- Priority must be given to human safety and health, where it is seriously threatened.
- Acute problem must be addressed before long – term problem.
- Measures affecting a large population must be given priority over measures benefiting a smaller number of people.

A major emergency in a mine is one that may cause injury or loss to the workers engaged in the mining and allied operations. Therefore the first action under the disaster management is the identification of risks involved and their priorities. From this risk assessment the identified are as below:

1. Use of explosives and the blasting operations, inducing vibrations due to blasting.
2. Slope Failures in open pit.
3. Solid waste generation, their disposal and rehabilitation.
4. Proper training on the use of equipments.
5. Development of green barrier to contain air and noise pollution.

Each parameter is discussed below:

**1. Use of explosive and the blasting operation:**

The firm has a magazine. Dirking and blasting will be undertaken periodically and gelatin will be used for blasting.

**2. Slope failures:**

The mining is proposed from top level and gradually advance towards lower levels. Height of benches will be kept 6.0m. In that case chances of slope will be negligible. However considering for steeper slope failure studies will be undertaken in future.

**3. Solid waste generation, their disposal and rehabilitation:**

Soil shall not be generated during course of mining. No waste shall be generated therefore no proposal & management.

#### **4. Proper training on the use of equipments:**

Machineries will be employed in the mine. Vocational training programme will be organize in every in every week to train the workers about mine workings & operating the machines.

#### **5. Development of Green belt :**

The green belt development programme will help in:

- Prevention of dust (leaves acting as a sink) and screening noise.
- Maintaining ecological balance.
- Increasing as the tic value. Plantation will be under taken towards the North West slope the area.

#### **Care and Maintenance during temporary Discontinuance:**

At the time of temporary discontinuance of mine, notice of Directorate General of Mine safety as well to district administration. All precautionary steps shall be taken into account in respect of care & maintenance.

### **7.3 RISK ABATEMENT**

The following precautionary measures shall be taken to prevent any accident

- ) Elimination of the source of hazard
- ) Substitution of hazardous process and materials by those which are less hazardous
- ) Geographical/ physical isolation of hazards from vulnerable communities
- ) Use of engineering controls to reduce the health risk
- ) Adoption of safe working practices such as regular equipment maintenance
- ) Use of Personal Protective Equipment should be mandatory

- 
- ) Top edge of opencast workings shall be kept properly fenced
  - ) Quarrying shall be done from top downwards. No overhang will be allowed.
  - ) Special attention and requisite provisions shall be taken while working in areas of geological weakness like existence of slip, fault etc.
  - ) Regular dressing of bench sides to ensure safety of workers employed within 5m or working face.
  - ) Provision of safety belt or rope while persons are at work at the quarry sides or benches from where there are chances of falling down for more than 1.8m.
  - ) Spoil banks not to be retained by artificial means at an angle of repose in excess of its natural angle.
  - ) Drafting and implementation of preventive maintenance schedule for various kinds of machinery deployed in opencast workings.
  - ) Provision of maintenance of properly laid haul roads with parapet wall fencing or guards and road signs at strategic points.
  - ) Transportation of sandstone within mine workings by vehicles under the direction, supervision and control of Mine Management only.
  - ) Proper maintenance of vehicles and weekly examination by an engineer and daily examination by a competent person.
  - ) Training and retraining (at specified interval) of the machinery operators.
  - ) Use of controlled blasting techniques. 500 m radius danger zone to be followed strictly.
  - ) Provision of blasting shelters – properly constructed and maintained.
  - ) Adequate maintenance of electrical equipments.
  - ) Adequate illumination after daylight.

## 7.4 SOCIAL IMPACT ASSESSMENT, REHABILITATION & RESETTLEMENT (R&R) ACTION PLAN

A detailed Socio Economic Assessment has been performed, which is given below:

### INTRODUCTION

In this section of the report an attempt has been made to measure Socio-economic impact of the proposed mine. The various attributes that have been taken into account are population composition, employment generation, occupational shift, household income, consumption pattern, ethnic issue and law & order problem. The key objective of the study is to assess possible impact of the project on socio-economic life of the people in the neighborhood known as study area.

The objectives of the socio-economic impact assessment are as follows:

- a) To collect baseline data of the study area.
- b) To know the socio-economic status of the people living in the study area of the proposed mining project.
- c) To assess the possible impact of the project on socio-economic aspects in the study area.
- d) To measure the impact of the project on Quality of life of the people in the study area.

### APPROACH & METHODOLOGY

- a) A mixture of both quantitative and qualitative approach has been adopted in the current socio-economic study.
- b) The study has been conducted based on primary and secondary data. While primary data has been collected through a sample survey of selected households in the study area, the secondary data has been collected from the administrative records of the Government of Uttar Pradesh, Census 2011, district hand books and from the Uttar Pradesh Government portal.



- c) The details regarding population composition, number of literates, workers, etc have been collected from secondary sources and analyzed. Also village/city/town wise details regarding amenities available in the study area have been collected from secondary sources like Census 2011, and analyzed.
- d) Two stage sampling design has been adopted to select the sampling units. The first stage units are census villages in the rural areas and towns/cities in urban areas. The ultimate stage units are households in the selected villages and towns/cities. Probability sampling has been adopted to select the sampling units.
- e) Estimation of various parameters has been made based on sample data and bottom top approach has been adopted.
- f) On the basis of a preliminary reconnaissance survey, two questionnaires were developed to make it suitable to fulfill the objectives of the study. The questionnaires contained both open ended and close ended questions
- g) The data collected during the above survey was analyzed to evaluate the prevailing socio-economic profile of the area.
- h) Based on the above data, impacts due to mining operation on the community have been assessed and recommendations for improvement have been made.

### CONCEPT & DEFINITION OF TERMS USED

- a) **Study Area:** The study area, also known as impact area has been defined as the sum total of core area and buffer area with a radius of 10 Kilometers from the periphery of the project site. The study area includes all the land marks both natural and manmade, falling therein.
- b) **QoL:** The Quality of Life (QoL) refers to degree to which a person enjoys the important possibilities of his/her life. The 'Possibilities' result from the opportunities and limitations, each person has in his/her life and reflect the interaction of personal and environmental factors. Enjoyment

has two components: the experience of satisfaction and the possession or achievement of some characteristic.

- c) **Household:** A group of persons who normally live together and take their meals from a common kitchen are called a household. Persons living in a household may be related or unrelated or a mix of both. However, if a group of related or unrelated persons live in a house but do not take their meals from the common kitchen, then they are not part of a common household. Each such person is treated as a separate household. There may be one member households, two member households or multi-member households.
- d) **Sex Ratio:** Sex ratio is the ratio of females to males in a given population. It is expressed as 'number of females per 1000 males'.
- e) **Literates:** All persons aged 8 years and above who can both read and write with understanding in any language are taken as literate. It is not necessary for a person to have received any formal education or passed any minimum educational standard for being treated as literate. People who are blind but can read in Braille are also treated as literates.
- f) **Literacy Rate:** Literacy rate of population is defined as the percentage of literates to the total population aged 7 years and above.
- g) **Labour Force:** The labour force is the number of people employed and unemployed in a geographical entity. The size of the labour force is the sum total of persons employed and unemployed. An unemployed person is defined as a person not employed but actively seeking work. Normally, the labour force of a country consists of everyone of working age (commencing from 14 to 16 years) and below retirement (around 65 years) that are participating workers, that is people actively employed or seeking employment. People not counted under labour force are students, retired persons, stay-at home people, people in prisons, permanently disabled persons and discouraged workers.
- h) **Work:** Work is defined as participation in any economically productive activity with or without compensation, wages or profit. Such

participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. The work may be part time or full time or unpaid work in a farm, family enterprise or in any other economic activity.

- i) **Worker:** All persons engaged in 'work' are defined as workers. Persons who are engaged in cultivation of land or milk production even solely for domestic consumption are also treated as workers.
- j) **Main Workers:** Those workers who had worked for the major part of the reference period (i.e. 6 months or more in the case of a year) are termed as Main Workers.
- k) **Marginal Workers:** Those workers who did not work for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers.
- l) **Work participation rate:** The work participation rate is the ratio between the labour force and the overall size of their cohort (national population of the same age range). In the present study the work participation rate is defined as the percentage of total workers (main and marginal) to total population.

## **FINDINGS OF THE STUDY**

### **Study Area**

The field investigation has revealed that the entire study area of the proposed mining project. The Sub-district (Tehsil) falling in the study area is Naraini. The study area comprises of 104 villages and there is no urban area.

## **BASELINE DATA OF THE IMPACT AREA**

**Table 7.1 Demographic Particulars**

<b>Description</b>	<b>Number</b>	<b>%</b>
Total Population	120873	100
Males	63648	52.66
Females	57225	47.34

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Sex ratio (No. of females per 1000 males)	899	
Total Literates	55672	100
Male	37961	68.19
Female	17711	31.81
Total Literacy Rate	58.68	
Male	75.78	
Female	39.55	
Gender gap in literacy rate	36.23	
Total Workers	48859	100
Male	29894	61.18
Female	18965	38.82
Total Main Workers	28176	100
Male	21886	77.68
Female	6290	22.32
Total Marginal Workers	20682	100
Male	8007	38.71
Female	12675	61.29
Total Agricultural Workers	36775	100
Cultivators	23365	63.54
Agricultural Labours	13410	36.46
Male workers in total agricultural workers	21420	58.25
Female workers in total agricultural workers	15355	41.75
Total Household Industrial Workers	4097	100
Male	2122	51.79
Female	1975	48.21
Total Other Workers	7987	100
Male	6352	79.52
Female	1635	20.48

### Amenities

S. No.	Amenities	Types	Number
1	<b>Educational Institutions</b>	Primary School	85
		Middle school	35
		Secondary School	7
		Senior Secondary	7
		Adult literacy centre	7
		Other Schools	4



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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District- Banda, Uttar Pradesh  
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Prop. M/s Bajrang Road Lines  
Partner-Shri Suresh Pratap Singh

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CHAPTER-VII: ADDITIONAL STUDIES

2	<b>Health Institutions</b>	Allopathic Hospital	0
		Ayurvedic Hospital	0
		Homeopathic Hospital	0
		Allopathic Dispensary	0
		Health Centre	0
		Registered Medical	4
		Community Health	25
		Maternity & Child	4
3	<b>Drinking Water #</b>	Well	98
		Tank	21
		Tube well	18
		tap	42
		Hand pump	102
4	<b>Communication</b>	Post Office	14
		Telephone	39
5	<b>Transport Facilities#</b>	Bus Service	1
		Railway Service	4
6	<b>Banking facilities</b>	Commercial bank	0
		Cooperative bank	1
			37
7	<b>Power #</b>		74
		Domestic Power	70
		Power for Agricultural	56
		Power for other use	37
		Power for all use	28

# No. of villages provided with the facilities

**Source: Census 2011**

## **DEMOGRAPHIC COMPOSITION**

### **Population**

According to Census 2011, the total population of the study area is 120873. As there is no urban area the entire population belongs to rural area. The overall sex ratio has been worked out to 899 females per 1000 males, which is much lower than the national average of 933 females per 1000 males.



Furthermore, around 21.3percent of the total population belongs to Schedule Caste community and the Schedule Tribe population in the study area is very negligible as per Census 2011.

### **Number of households and household size**

The entire population of the study area has been grouped into 4891 households and the average household size is 7. The household size varies between 5 and 8.

### **Literacy and Literacy rate**

The total number of literates in the study area has been worked out around 58.68 percent of the total population. The literacy rate of male has been worked out to 75.78 percent as against 39.55 percent for female, creating a gender gap of 36.23 percent.

### **Workers and work participation rate**

The total number of workers in the study area is 48859, which is 40.42 percent of the total population. Among the total workers 57.7percent are main workers and the remaining 42.3percent are marginal workers. The percentage of male in the main workers is 77.7percent, while it is only 38.7percent in the case of marginal workers. On the other hand, the percentage share of female in the main workers is only 22.3percent; it is 61.3percent in the case of marginal workers. This indicates that male dominates the both main workers and the marginal workers.

The Table and the figure below indicate the categorization of workers based on occupation:

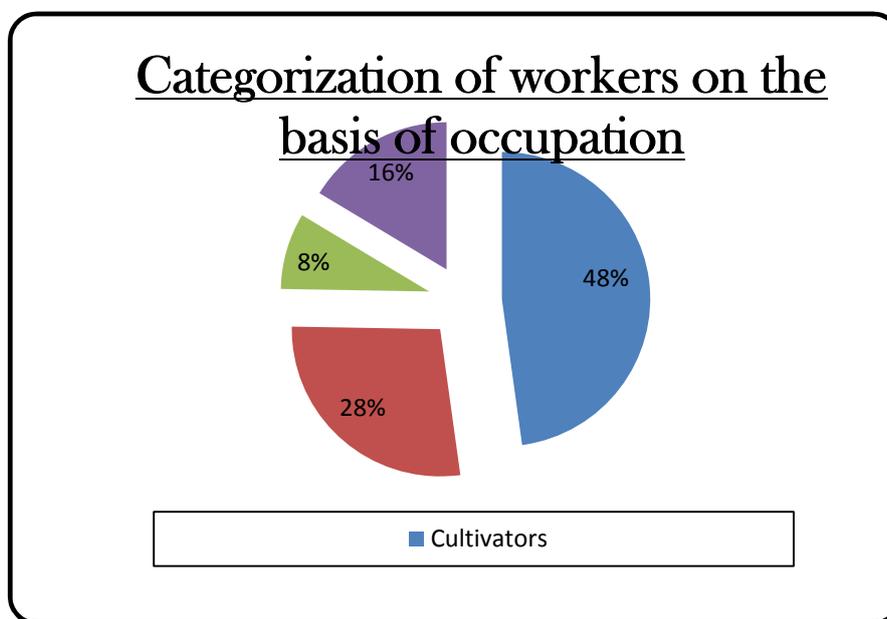
**Table 7.3: Categorization of workers on the basis of occupation**

<b>S. No.</b>	<b>Worker category</b>	<b>Number of workers</b>	<b>% to total workers</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>

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<b>1</b>	Agricultural Workers	36775	75.26
	a) Cultivators	23365	47.82
	b) Agricultural labour	13410	27.44
<b>2</b>	Household Industrial Workers	4097	8.39
<b>3</b>	Other workers	7987	16.35
<b>Total</b>		<b>48859</b>	<b>100.0</b>



The classification of workers based on occupation reveals that 75 percent of the total workers are Agricultural workers. The share of cultivators in the total workers is 48 percent and that of Agricultural labours is 28 percent. Barely 8 percent of total workers are Household Industrial Workers and 16 percent are 'Other workers' which includes white collar workers, professional workers, shopkeepers, traders and businessmen.

### **POSSIBLE IMPACT ASSESSMENT**

#### **Impact on population composition**



The impact of the proposed mining project on population composition will be marginal as only few skilled and managerial staff will be recruited from outside and the rest will be recruited locally. The impact will be significant if a large number of people from outside get employed in the proposed project. In that case not only the population of the study area will go up but also the skewed sex ratio may make permanent social effects like rise in exploitation of women, higher crime rate, increase in sexual diseases and depression among youth.

### **Impact on employment generation**

The proposed sandstone mining project is expected to provide employment opportunities to 30 persons of which 7 will be skilled workers, 2 will be semi-skilled workers and the remaining 20 will be unskilled workers. It is understood that all the persons to be deployed for various mining activities will be recruited locally and there is very little scope for migration of people from outside the study area. The employment potentiality of the project is expected to ameliorate the economic condition of the families of those persons who will get employed in the proposed mining project. However, the mining project will provide seasonal employment. Further, the project will provide indirect employment to about 30 people who will be involved in segregation of extracted mining materials, crushing of boulders, petty business and service oriented industries.

### **Impact on Health**

Extraction of sandstone poses serious health risks due to dust, quarrying and stone crushing. The effects will vary depending upon the nature of the dust particles, silica content in it and the size of the particles. Pneumoconiosis is an occupational lung disease often caused to miners, due to the inhalation of dust. Silica content in the sand may also lead to Silicosis, which is again an occupational lung disease. Miners may also suffer with occupational respiratory ailments, skin allergies etc, but the

same are preventable if exposure is minimized. Further, regular health check-up of the miners is required to prevent any negative impact on their health. In the present mining project, no adverse impact on health is expected if minimum precautions are taken by the miners

### **Impact on income**

In India poverty is widespread. According to an estimate made by World Bank during 2005, 26 percent of the total Indian population falls below the International poverty Line of US\$ 1.25 a day (PPP, in nominal terms ₹ 21.6 a day in urban areas and ₹ 14.3 in rural areas). Uttar Pradesh is one of the worst poverty ridden states in India, with per capita income of Rs. 26,051. The proposed mining project at Girwan village is expected to provide casual employment to 2 unskilled workers and 7 skilled workers for a period of 260 days in a year. According to Department of labour, Government of Uttar Pradesh each unskilled worker is eligible to get a minimum basic wage of Rs. 100 per day. In addition they will get V.D.A amounting to Rs. 65.50 per day. Thus the total amount an unskilled worker is expected to get is Rs 165.50 per day. Further, a semi-skilled worker will get a basic wage of Rs 114 and V.D.A amounting to Rs.74.69 making the total amount of Rs. 188.69 per day. Lastly, a skilled worker can expect to get a minimum wage of Rs. 126.54 and V.D.A amounting to Rs. 82.92 making the total amount of Rs. 209.46 per day. The impact of the proposed mining activity on household income in the study area is thus positive since it will provide employment to local people, which will result to an increase in household income of those workers who will be recruited for mining operation. However, this impact will be effective for a period of 260 days in a year.

### **Impact on consumption pattern**

The field survey has revealed that people in the study are poverty ridden. Increased household income may change the consumption pattern of few

families due to increased purchasing power but majority of the people will continue to be burdened with poverty.

### **Impact on road development**

Movement of trucks/tripper and other vehicles to and fro the quarry is expected to increase substantially, when mining will start. The existing roads connecting the quarry with the national and state highways are mostly narrow mud roads. There will be mud slide and traffic bottle neck if these roads are not widened and their conditions are not improved by making them paved roads. Hence, there is ample scope for road development in and around the mining areas.

### **Impact on law & Order**

As local people will be employed to run the quarry, no law & order problem is envisaged. It is expected that the workers will attend to their duties from their residence and return to their homes after the day's work is over. There would have been law & order problem if the workers were migrants and lived in shanties closed to the mining area. However, to meet any untoward incident one police post may be set up closed to the project area.

### **PUBLIC PERCEPTION ABOUT THE PROJECT**

Visit to project village has revealed that no villager was opposed to the proposed mining project. They whole heartedly welcomed it as they were disgusted with perennial poverty. They hoped that the upcoming mining project will definitely increase their income which in turn will increase their purchasing power. They however, demanded that the beneficiaries should be selected from those who belong to BPL category and registered under SGSY scheme.

The villagers living in the distant villages located within the study area were found either not aware or partially aware of the upcoming mining project and they did not make any comment about its utility. They however demanded that labour intensive projects should be implemented in their villages, to fight poverty.

## 7.5 SUGGESTIONS

### **Provision of First Aid at mining site**

Extraction of Granite, khanda, gitty, boulder poses serious health risks due to dust, quarrying. The effects vary depending on the nature of the dust particles, silica content in it and the size of the particle. To meet any emergency during extraction of the mineral and subsequent loading in the transport vehicles, provision for First Aid should be made by the project proponent. Before the affected person is removed to a doctor or health institution for necessary medical aid, the miner should be provided with First Aid.

### **Tie up with the nearest PHC for medical help**

To meet the medical needs of the mine workers it is suggested that tie-ups with nearest hospital or Primary Health Center (PHC) may be made. Few beds may be exclusively reserved for the mine workers in the above health institutions. This will ensure timely medical aid to the affected persons.

### **Supply of Mask and Gloves**

The mine workers are subject to respiratory diseases, muscular-skeletal and gastro-intestinal disorders and skin diseases. For protection from dust it may be made compulsory for all mine workers to wear masks and gloves while working in the mines.

### **Regular health checkups**

The miners may be encouraged to undergo health checkups at regular intervals in order to protect themselves from various diseases. The health Department of Uttar Pradesh Government must Organize Health Camps at regular intervals preferably in every quarter. Further, free medical facilities may be made available to the workers and their family members.



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### **Special telephone number**

A special telephone number may be made available to the mine workers. In case of emergency the miners can dial the above number for medical assistance. Vehicle may be provided to the patients in short duration for shifting to the health institution.

### **Special Group Insurance Scheme**

All the mine workers may be covered under a Group Insurance Scheme of LIC or any other Insurance company, if not so far.

### **Distribution of Blankets and Quilts**

During winter season the mine workers may be distributed blankets and quilts free of cost.

## **7.6 CONCLUSION**

The implementation of the mining project will throw opportunities to local people for both direct and indirect employment. Since the quarries will be leased out to successful allottees, Granite, khanda, gitty, boulder mining operation in the state will get legalized and it will fetch income to the state exchequer. The project will also provide impetus to industrialization of the area. It is likely the intending entrepreneurs will venture to set up micro and small scale units in the near future making the area a mixed society, dependent on industry, trade and business. At present agriculture is the main occupation of the people as 78 percent of the population depends on it. With the implementation of the proposed mining project the occupational pattern of the people in the area will change making more people engaged in industrial and business activities rather in agriculture. Thus there will be a gradual shifting of population from agriculture to mining and industry. Further, the mining and industrial activities in the area may lead to rapid increase in population and thereby urbanization. Due to urbanization of the area, employment opportunities will further increase.

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The study area is still lacking in education, health, housing, water, electricity etc. It is expected that same will improve to a great extent due to proposed mining project and associated industrial and business activities.

Proposed activities and expenses on Corporate Social Responsibility will be as per CSR Mandate of the Government.



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Chapter-8  
Project Benefits

# CHAPTER-VIII



**CHAPTER-VIII**  
**PROJECT BENEFITS**  
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## 8.0 GENERAL

The execution of the project, bring overall improvement in the locality, neighborhood and the State by bringing industry, roads, employment and hence improving living standard and economic growth.

### 8.1 PHYSICAL BENEFITS

The opening of the proposed project will enhance the following physical infrastructure facilities in the adjoining areas.

- a. **Road Transport:** There will be improved road communication due to the proposed project and maintenance will also be done time to time.
- b. **Market:** Generating useful economic resource for construction. Excavated mineral will provide a good market opportunity.
- c. **Enhancement of green cover:** As a part of reclamation plan, plantation will be carried along the river banks or along the road sides or near the civic amenities.
- a. **Creation of community assets** (infrastructure) like provision for drinking water, construction of school buildings, village roads/ linked roads, dispensary & health centre, community centre, market place etc, as a part of corporate social responsibility.

### 8.2 SOCIAL BENEFITS

- a) **Increase in Employment** Potential due to the project activity. Employment opportunities will increase both directly as well indirectly.
- b) **Contribution to the Exchequer** as the saleable minerals will be given royalty. Since the quarries will be leased out to successful allottees, mining operation in the state will get legalized and it will fetch income to the state exchequer.
- c) **Increased Health related activities:** Healthcare promotional activities will be undertaken. Pre-placement & and Periodic medical checkups will be done, which will lift the general health status of the residents of the area. Health camps, medical aids, family welfare programs, immunization camp sports will be arranged.



**Table- 8.1: Budget for Corporate Environmental Responsibility (CER)**

<b>S. No.</b>	<b>Activity</b>	<b>Capital Cost (In Rs.)</b>	<b>Quantity</b>
<b>1.</b>	Construction of toilet at Pt. J.N. Inter College at Village Girwan	30,000	1 Toilet By May,2022
<b>2.</b>	Distribution of solar lamp at Village Girwan	30,000	25 solar lamp by Dec, 2022
<b>3.</b>	Installation of water storage tank in school at Village Girwan	30,000	3 Water tank of 1000L Capacity
<b>4.</b>	Distribution of sanitary items in nearby village Girwan	30,000	-
	<b>TOTAL</b>	<b>1,20,000</b>	

- d) **Educational attainments:** Educational activities will be promoted by the lessee. Awareness program will be arranged covering basic issues related to primary level education, environment, health and hygiene etc.
- e) **Strengthening of existing community** facilities through the Community Development Programme.

### **8.3 ENVIRONMENTAL BENEFITS**

#### **ENHANCEMENT OF GREEN COVER**

Plantation/afforestation will be done as per program in the 7.5 m barrier zone along the periphery of mine lease during the 5 year mining period. Plantation will also be undertaken outside the lease area around crusher plant. 100 plant are Proposed for Plantation in project. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people will also be involved. The



management will provide free saplings of fruit and other trees, etc. to local during rain for plantation.

**List of Plant Species to be Planted**

<u>S.No.</u>	<u>Botanical Name</u>	<u>Common Name</u>
1.	<i>Psidium guajava</i>	Amrood
2.	<i>Azadirachta indica</i>	Neem
3.	<i>Polyalthiapendula</i>	Ashok
4.	<i>Delonixregia</i>	Gulmohar
5.	<i>Mangifera indica</i>	Aam

The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains.



Chapter-9

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Environment Management Plan

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
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Prop. M/s Bajrang Road Lines  
Partner-Shri Suresh Pratap Singh

EIA/EMP  
CHAPTER-IX: ENVIRONMENTAL MANAGEMENT PLAN

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# CHAPTER-IX



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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**CHAPTER-IX**  
**ENVIRONMENTAL MANAGEMENT PLAN**

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## 9.0 INTRODUCTION

To mitigate the adverse impact which may be caused due to the mining operations and overall scientific development of local habitat, environmental management plan (EMP) has been formulated and integrated with the mine planning. The details of the anticipated impacts and mitigative measures have been discussed in Section IV of this report, based on the results of present environmental conditions and environmental impact assessment. The EMP has therefore been made considering implementation and monitoring of environmental protection measures during and after mining operations.

The mitigation measures which reduce the impact have already been identified earlier in this report. To minimize the adverse impact, certain additional EMP is enumerated below for implementation.

Environmental Management Plan (EMP) is aimed at mitigating the possible adverse impact of a project and for ensuring to maintain the existing environmental quality. The EMP converses all aspects of planning & operation of the project, which are relevant to environment. It is essential to implement the EMP right from the planning stage and then continuing it throughout the operation stage. Therefore the main objective of the EMP is to identify the project specific activities that would have to be considered for investigation of the significant adverse impacts and the mitigation measures required. The specific measures that shall be put to practice to minimize the impact on the environment are discussed below:

### 9.1 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Proper environmental management plan is proposed for Granite, Khanda, Gitty, Boulder Mine project to mitigate the impact during the mining operation.

) No overburden or loose sediments will be kept in the vicinity of the working



benches.

- ) The possibility of the project activity contributing to the pollution of watercourses of the region or to the ground water regime is so less that this does not significantly constitute an area of concern.
- ) Construction of well-compacted roads.
- ) Regular water spraying on haul roads and waste dumps by tankers.
- ) Provision of dust collectors for the drilling & crusher machines
- ) Controlled blasting (if any required)
- ) Supply of personal protective equipments like dust masks, earplugs, helmets, safety boots etc. for the miners.
- ) Plantation of wide leaf trees, creepers, tall grasses around quarry sites, waste dumps, road and other surrounding barren zones.
- ) Proper and regular maintenance of vehicles, compressors and jack hammers.
- ) Provision of supplying earplugs for jackhammer drillers and crusher operators.
- ) Care should be taken that noise produced during vehicles movement for carrying building stoneis within the permissible noise level.
- ) Carrying of blasting (if any) only during daytime (not during cloudy weather and when strong wind is blowing towards residential areas). Blasting will be carried out with limited explosives at a time so that the noise generation can be well maintained within the prescribed limits.
- ) Provision of Green Belt (thick foliage) along the lease boundary and road.
- ) Strict observance of the provisions of Acts, Rules and Regulations in respect of safety both by management and the workers.
- ) Proper planning and designing of work in order to reduce the risk of hazards.
- ) Specific instructions and supervisions of working where danger due to fall of side (overhanging, undercutting of bench, fall of objects from higher

benches/places is apprehended).

- ) Training of work persons and the officials.
- ) Since the haul road will be of considerable length, due importance will be given in the construction of road. The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
- ) A code of practices for tipping in stock piles/dumping of overburden at dump yard and loading point will be implemented.
- ) In respect of contract work, safety code for contractors and workers will be implemented.
- ) They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centers. All personal protective equipments will be supplied to them.
- ) A code of practice for fighting fire will be implemented.
- ) Competent persons like fitters, mechanics will be imparted with special attention to project impact.
- ) Provision of pit safety committee meeting every month (20th day) to discuss the safety of the mines and the persons employed.
- ) Celebration of annual mines safety week and environmental week in order to develop safety awareness amongst employees.
- ) Pre joining medical checkup shall be done and regular health check-up in 6 monthly intervals is planned for the employees.
- ) Care will be taken that no cooking, or burning of woods will be allowed in the adjoining area.
- ) If some causality or injury to animal occurs, it should be informed to forest department and proper treatment should be given.
- ) Corridor movement of wild mammals (If exists) should be avoided

## 9.2 ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION

Environmental Management Plan serves no purpose if it is not implemented with true spirit. Some loopholes in the EMP can also be detected afterwards when it is implanted and monitored. Thus, an implementation and monitoring programme has to be prepared.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management should strengthen the existing control measures as elaborated earlier in this report and monitor the efficacy of the control measures implemented within the mining area relating to the following specific areas:

- a) Collection of air and water samples at strategic locations with frequency suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.
- b) Collection of soil samples at strategic locations once in every year and analysis thereof with regard to deleterious constituents, if any.
- c) The effectiveness of drainage system depends upon proper cleaning of all drains provided in the surrounding of mine area. Any blockage due to siltation or loose material will be checked at least once in a month.
- d) Measurement of water level fluctuations in the nearby ponds, dug wells and bore wells.
- e) Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done in every quarter of the year.
- f) Plantation/afforestation as should be done as per program. Regular watering of plant and fencing to protect them from cattle/goats has to be provided. Post

plantation, the area will be regularly monitored in every season forevaluation of success rate. For selection of plant species local people should also be involved.

Mine management will be in regular touch with local surrounding villages to update the various developmental schemes made by them. They will also consider any immediate requirement, which could be taken care of in near future.

Mine management will be in regular touch with State Pollution Control Board and Indian Bureau of Mines and send them annual progress report. Any new regulations considered by State/Central Pollution Control Board for the industry will be taken care of.

### **9.3 ENVIRONMENTAL MANAGEMENT CELL (EMC)**

To implement the EMP, a structured Environment Management Cell (EMC) which includes plant manager and representative of consultants interwoven with the existing management system is there. A comprehensive environmental monitoring program as laid down by State Pollution Control Board is followed.

All the above observations will be complied and documented by the EMC to serve the following purposes:

- ) Identification of any environmental problems that are occurring in the area.
- ) Initiating or providing solution to those problems through designed channels and verification of the implementation status.
- ) Controlling activities inside the project, until the environmental problem has been corrected.
- ) Suitably responding to emergency situations.

#### 9.4 BUDGET ALLOCATION FOR EMP IMPLEMENTATION

Annual budget for EMP is very essential for successful implementation of EMP. The fund allocated will not be diverted for any other purposes and the top management will be responsible for this. The budget will take into consideration the following capital and operating expenses:

1. Capital cost for installing pollution control systems.
2. Field cost for monitoring of parameters.
3. Cost of any defined outsourcing
4. Cost of chemicals, consumables and transport for data generation
5. Man power cost for environmental cell
6. Any other cost as per EC condition.

**Table – 9.1 Budget Allotted for the Project Operation Cost & Environmental Management Plan**

S.No	Description	Unit	Total (Rs.)
<b>A. Project Operation Cost</b>			
1	Manpower Cost:	(Total Man power -30)	38,10,000
2	Expenditure on Occupational Health: PPE & First Aid Facility Medical checkup and Medicine (Once in a month)		3,15,000
3	Cost of infrastructure, Equipment, Vehicles etc.		13,00,000
4	EMP Cost		4,88,000

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	<b>Total Amount</b>		59,13,000
<b>EMP BREAK UP</b>			
<b>SI. No.</b>	<b>Measures</b>	<b>Capital Cost (In Rs.)</b>	<b>Recurring Cost (In Rs.)</b>
1	Pollution Control Dust Suppression		2,08,000
2	Pollution Monitoring		
	i) Air pollution	--	30,000
	ii) Water pollution	--	20,000
	iii) Soil Pollution	--	30,000
	iv) Noise Pollution	--	20,000
3	Green belt development	1,20,000	30,000
4	Haul road maintenance	--	30,000
5	CER Cost (Included in EMP Cost as per OM dated 30 Sep 2020)	1,20,000	
<b>Total</b>		<b>2,40,000</b>	<b>3,68,000</b>



## **Chapter- 10**

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### **Executive Summary**

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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CHAPTER-X: EXECUTIVE SUMMARY

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# CHAPTER-X



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
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**CHAPTER-X**  
**EXECUTIVE SUMMARY**

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<b>10.6</b>	BIOLOGICAL ENVIRONMENT	10/X
<b>10.7</b>	LAND ENVIRONMENT	14/X
<b>10.8</b>	AIR ENVIRONMENT	14/X
<b>10.9</b>	WATER ENVIRONMENT	15/X
<b>10.10</b>	NOISE ENVIRONMENT	16/X
<b>10.11</b>	TRAFFIC ANALYSIS	16/X
<b>10.12</b>	SOCIO-ECONOMIC ENVIRONMENT	17/X
<b>10.13</b>	ENVIRONMENTAL MANAGEMENT PLAN (EMP)	17/X
<b>10.14</b>	ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION	19/X
<b>10.15</b>	MONITORING SCHEDULE AND PARAMETERS	21/X
<b>10.16</b>	BENEFIT OF MINING	22/X
<b>10.17</b>	CORPORATE SOCIAL RESPONSIBILITY	24/X

*Suresh*

2/X



## 10.0 INTRODUCTION OF PROJECT&PROPONENT

The proposed project is to mine Building stone from the lease area. The LOI has been granted to M/s Bajrang Road Lines, Shri Suresh Pratap Singh, Vide **Letter No. 2338 / खनिज-30,बांदा** dated **06.10.2020**, for mine located at Gata No.1876,Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda,Uttar Pradesh. The expected project cost of the mining is Rs.59.13lakhs; Area- 1.21Ha.with production has been estimated 12100m<sup>3</sup>/year

The EIA-EMP report has been prepared as per the ToR granted under the EIA Notification. Further to assess the impact on environment due to proposed mining, it is necessary to ascertain present status of environment prevailing at the project site and proposed operation including identification and Assessment of impact on the environment& socio-economic condition of human beings.

As per NGT Order Dated 13-09-2018 and MOEF & CC OM No L-11011/175/2018-IA-II(M) Dated 12-12-2018 the project comes under B1 Category since the area in 500m radius of the project boundary is more than 5 Ha. Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received from SEIAA-SEAC, U.P. Ref No. 831/Parya/SEAC/6104/2019 Dated 22.3.2021 attach as Annexure-I.

### 10.1 LOCATION

The mine lease area is located at Gata No.1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, State-Uttar Pradesh.

<b>Sanctioned Mining Lease Area</b>		
<b>Pillar No.</b>	<b>Latitude</b>	<b>Longitude</b>
<b>A</b>	25°18'24.06"N	80°23'0.21"E
<b>B</b>	25°18'25.48"N	80°23'5.07"E



<b>C</b>	25°18'22.37"N	80°23'6.04"E
<b>D</b>	25°18'22.37"N	80°23'2.64"E
<b>E</b>	25°18'21.52"N	80°23'2.35"E
<b>F</b>	25°18'22.24"N	80°23'0.67"E

<b>Nearest Settlements</b>	<ul style="list-style-type: none"> <li>• Girwan (0.5km* towards NE)</li> <li>• Patraha ( 0.95km* towards NW)</li> </ul>
<b>Nearest Road</b>	<ul style="list-style-type: none"> <li>• MDR 11 B (1.5 km* towards NE)</li> </ul>
<b>Nearest Airport</b>	Khajuraho Airport, approx 72.5km* towards SW direction.
<b>Nearest Railway Station</b>	Khurhand Railway Station, approx 11.5km* towards NE direction.
<b>Nearest National Park within 10 km</b>	None within the periphery of 10 km
<b>Water body</b>	Ken River approx. 5 km* towards SW
<b>Nearest School/ college/Hospital</b>	<ul style="list-style-type: none"> <li>• Pt. J.N. Inter College, Girwan ( 1.45km towards NNE)</li> <li>) Swami vivekanand Shiskshan Sansthan, Girwan (1.75km* towards NNE)</li> <li>• New PHC Deorar (7km* towards SE)</li> </ul>
<b>Reserve/ Protected Forest</b>	<ul style="list-style-type: none"> <li>) Bahadurpur Reserve forest (6.5 km towards WSW)</li> <li>) Thakkura Protected Forest (8km towards 8km)</li> </ul>

## 10.2 RESERVES

The geological reserves estimated by cross-sectional method can be categorized into four classes.

### a) Proved Reserves( UNFC CODE- 111):

There is no exposed rock (outcrop) in the form of Building stone, Khanda, Gitti, Boulder therefore there is no outcrop to be considered

as under proved category 111 along with the measured / estimated depth of 24 m below the surface level. Thus, in the entire category (111) is estimated accordingly up to a block of 34 m thickness

**b) Probable Reserve (UNFC CODE- 122):**

A 10 m. thickness below the proved reserve is considered as Probable mineral reserves.

**c) Feasibility in mineral resources (UNFC CODE- 341):**

The mineral block with statutory barrier with in proved zone has been not considered as 341.

**d) Pre-Feasibility in mineral resources (UNFC CODE- 222):**

Mineral blocked with in statutory barrier in probable zone has been not considered as 222.

**Table10.1- Summary of Geological Reserve is as below:**

Category	UNFC Code	Quantity in m <sup>3</sup>	Grade
<b>Total Mineral Reserve</b>			
Proved Mineral Reserve	111	301590	Granite, Khanda, Gitty, Boulder
Probable mineral Reserve	122	84654	-do-
<b>Total Remaining Resources</b>			
Feasibility Mineral Resource	341	72918	-do-
Prefeasibility Mineral Resource	222	69120	-do-
Inferred Mineral Resource	333	Nil	
<b>Total Reserves + Resources</b>		<b>5,28,282</b>	-do-

### 10.3 MINING PROCESS

#### I. Existing Method of mining:

It will be an opencast manual mine with adoption of drilling & blasting. Drilling is to be carried out with 32 mm diameter jack hammer drill rids & blasting material is to be used as an explosive. The blasted material broken by manually up to sized 2 ft. & loaded into tippers manually dispatch to crusher plant. Mining is being carried thought the formation of one bench. The height of bench is to be kept 3 m width of benches was kept 3.0 m with face slope 45°.

#### II. Proposed method of mining:

It shall be an opencast semi-mechanized mine. Excavator shall be deployed for removal of big boulders of blasted material from quarry & loading of the excavated mineral in to tractor trolleys. Drilling shall be carried out with 32 mm diameter jack hammers & blasting shall be carried out with slurry explosives. The height & width of bench shall be kept 6 m & 6 m with face slopes 45°. The blasted material shall be loaded by excavator to the tippers. Big boulders will be broken to the required size manually and will be loaded by excavator and will be transported to crusher plant.

**Table 10.2 Proposed productions in mining plan period – 05 years**

Year	Overburden (m <sup>3</sup> )	ROM Granite (Khanda, Gitti, Boulder) (m <sup>3</sup> )	Saleable Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> )	Sub grade Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> )	Granite (Khanda, Gitti, Boulder) reject (m <sup>3</sup> )	Granite (Khanda, Gitti, Boulder), (m <sup>3</sup> ) to overburden ratio
First	Nil	12,100	12,100	Nil	Nil	Nil

Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
 District- Banda, Uttar Pradesh  
 Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
 Prop.M/S Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP  
 CHAPTER-X: EXECUTIVE SUMMARY

<b>Second</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Third</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Fourth</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Fifth</b>	Nil	12,100	12,100	Nil	Nil	Nil
<b>Total</b>		<b>60,500</b>	<b>60,500</b>			

### 10.4 WATER DEMAND

The water required is mainly for dust suppression, green belt development and drinking during mining operations. The total requirement will be 7.98KLD. Out of total requirement, water for dust suppression and green belt development will be taken from the bore well situated inside the mine lease area, while for drinking purpose water is brought from the hand pumps and wells in the nearby village and stored in pitchers.

**Table-10.3- Water Requirement**

S.NO.	Purpose	Manpower/Area	Water Demand (KLD)	Source
1.	Drinking	Manpower 30*10L=300lpcd	0.30	Nearby village
2.	For Mobile Toilet	Manpower (30) 30*10L=300 lpcd	0.30	Private tanker (Treated Water /Pond Water)
3.	Plantation	100 trees *2L = 200L	0.20	Private tanker (Treated Water /Pond Water)
4.	Dust Suppression	=(598 m Length x 6mWidth=3588m <sup>2</sup> )x2	7.18	Private Tanker (Treated Water /Pond

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7/X



		lpcd/Sq.m = 7176 lpcd		Water )
	<b>Total</b>		<b>7.98</b>	

### 10.5 BASE LINE DATA

This section contains the description of baseline studies of the 10 km radius of the area surrounding Gata No.1876, Khand No.-04, Village- Girwan, Tehsil- Naraini, District-Banda, State-U.P. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

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

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

**Table 10.4: BASELINE ENVIRONMENTAL STATUS**

Attribute	Baseline status
<b>Ambient Air Quality</b>	Ambient Air Quality Monitoring reveals that the maximum & minimum concentrations of PM <sub>2.5</sub> for all the 5 AQ monitoring stations were found to be 53.6µg/m <sup>3</sup> at AQ-3 and 38.20µg/m <sup>3</sup> at AQ-1, respectively. The maximum & minimum concentrations of PM <sub>10</sub> for all the 5 AQ monitoring stations were found to be 92.39µg/m <sup>3</sup> at AQ-3 and 72.06µg/m <sup>3</sup> at AQ-3, respectively. As far as the gaseous pollutants SO <sub>2</sub> and NO <sub>x</sub> are concerned, the prescribed CPCB limit of 80µg/m <sup>3</sup> and 100µg/m <sup>3</sup> has never surpassed at any station.
<b>Noise Levels</b>	Noise monitoring was carried out at 4 locations. The results of the monitoring program indicated that both the daytime and night time levels of

	noise were well within the prescribed limits of NAAQS, at all the four locations monitored.
<b>Water Quality</b>	3 Groundwater samples and 2 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500. From the surface water analysis it is evident that most of the parameters of the samples comply with 'Category C' standards of CPCB Drinking water source with conventional treatment followed by disinfection.
<b>Soil Quality</b>	Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.42 to 7.85, which shows that the soil is alkaline in nature.
<b>Ecology and Biodiversity</b>	There are no Ecologically Sensitive Areas present in the study area
<b>Traffic analysis</b>	From the analysis it can be seen that the LOS is not likely to change near village

## ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION

### MEASURE 10.6 BIOLOGICAL ENVIRONMENT

#### FLORA

##### Flora of the Core Zone

Core zone is slightly rocky with increased elevation up till 8-10m from the adjoining agriculture land. Thus this zone is not adequate for agriculture. The vegetation of the core zone is mainly grasses, weeds, shrubs which are surplus in the area. No ecologically sensitive plant has been reported from this area.

Among the grasses, *Dactyloctenium aegyptium*, *Echinochloa colona*, *Imperata cylindricalare* very common. The large weeds which infest uncultivated tracts



are aak (*Calotropisprocera*), arind (*Ricinuscommunis*), dhatura (*Daturametel*) and thor (*Opnuntiastricta*). Other noxious weeds and those which appear in crops are pohlior thistle (*Carthamusoxyacantha*), shialkanta (*Argemonemexicana*), and kandyari (*Solanumxanthocarpum*).

### **Flora of the Buffer Zone**

Buffer zone of the proposed project is mainly agricultural land. The flora of buffer zone comprises of plants growing on the edges of agricultural land, village woodlots and trees planted along the roads. Many tree species are planted in the area because of their usefulness, economic and aesthetic values. Some trees growing along the nalas and rivers. Common tree species observed in the area are Babool (*Acacia nilotica*), Siris (*Albizialebeck*), Aam (*Mangiferaindica*), Jamun (*Syzygiumcumini*), Bel (*Aeglemarmelos*), Tut (*Morusalba*), Bakain (*Meliaazedarach*), Bargad (*Ficusbengalensis*), Neem (*Azadirachtaindica*), Peepal (*Ficusreligiosa*), Safeda (*Eucalyptus umbelatus*), Sisam (*Dalbergiasissoo*), etc.

Weeds like *Argemonemexicana*, *Cenchrusciliaris*, *Heteropogoncontortus*, *Lantana camara*, *Partheniumhysterosphorus*, etc. are very common. These weeds are affecting the agricultural productivity of the region due to fast growth, short life cycle and enormous production of seeds.

### **Agricultural Crops**

The three main cropping seasons in the district are Kharif, Rabi and Zaid. The other crops raised in the district include wheat, paddy, maize, pulses and oilseeds. Main fruits grown are mango and guava. The autumn or Kharif is usually known as siyari, and the spring or Rabi as Unhari. The Zaid or extra harvest is insignificant in this area. Gram, Wheat, Barley, Peas, Arhar and Masoor are the main crops of Rabi. Jowar, Rice, Bajra, Urad, Moong and Moth

are the main crops of Kharif. Melon, Water-melon, Bitter gourd and Pumpkin are the main crops of Zaid.

## **Fauna**

### **Fauna Reported in Core zone:**

During the faunal survey in the area no wildlife corridor or movement of animals was recorded from proposed project area. A list of animals of the study area has been prepared on the basis of local inquiry from the village people and from the available published literatures. The animals thus recorded were cross checked with Wildlife Protection Act, 1972 for their schedule.

No bird's habitats like nesting, breeding and forging patterns are noticed in the core zone. Local birds are noticed crossing over the area. No fixed pattern in migratory behavior is noticed.

### **Fauna reported in Buffer zone:**

**Mammal:** Many domesticated mammal species are reported from buffer zone during the field survey. Common domestic animals like Buffalo, cow, goat etc. can be noticed in open grass fields while grazing. Small mammals like Indian palm squirrel and field mouse are noticed in vicinity of the village. Inquiry from village people regarding wild animals reveals that Monkey (*Macacamulatta*), Indian Hare (*Lepusnigricollis*), Nilgai (*Boselaphustragocamelus*), Mongoose (*Herpestesedwardsii*), etc. are often seen in the area.

**Avifauna:** Pied kingfisher (*Cerylerudis*), Red wattled lapwing etc are noticed. House crow (*Corvussplendens*), House sparrow (*Passer domesticus*), Common hill Myna, Swallow are of common occurrence.

**Reptile:** The reptilian species commonly reported are Agama (*Laudakiatuberculata*) in settlement area, Garden lizard (*Calotesversicolor*) and



*Eutropisma macularia* along shady places in agricultural field or where growth of bushes is noticed. Among non-poisonous snakes rat snakes (*Ptyas mucosus*) are commonly noticed in field, followed by poisonous snakes like Cobra (*Naja naja*) and Common krait are occasionally encounter by the farmers.

### **Impacts on Biodiversity**

Present data have been collected through direct inventory as well as various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre-project biological environmental conditions. There are no endangered species, wildlife sanctuary, wildlife corridors, faunal migratory routes or eco-sensitive area near the whole study area. There may be disturbance to free movement / living of fauna viz. Birds, Reptiles etc. For this, mine owner planted a good roadside plantation along both side of the mine road.

### **Impacts on agriculture**

The area around the mine lease area is all barren and no agriculture activity is going on. Therefore no significant impact on the agriculture around the project site is expected.

### **Impacts on aquatic ecology**

Mining activities may result in affecting the riverine ecology by polluting the river water. But in this case, river/canal flows almost 5km away from mine site and also nothing is being discharged into the river/canal. However, indiscriminate fishing by labourers etc. may reduce fish stock availability for commercial and sport fishermen. Thus, it is recommended that adequate surveillance measures are implemented during project operation phase to ameliorate such impacts.

### **Mitigation Measures**



There is a requirement to establish a stable ecosystem with both ecological and economic returns. Minimization of soil erosion and dust pollution enhances the aesthetic value of the core and the buffer zone. To achieve this, it is planned to increase the area of green cover of plantation and green belts activities. The basic objectives of plantations are as follows:

- ) Improvement of Soil quality,
- ) Quick vegetative cover to check soil erosion,
- ) Improvement in mining site stability,
- ) Conservation of biological diversity of plants, birds and animals,
- ) As dust receptor and dust filter, this is likely to be produced during mining.
- ) If birds are noticed crossing the core zone, they will not be disturbed at all;
- ) Labours will not be allowed to discards food, plastic etc., which can attract animals/birds near the core site;
- ) Only low polluting vehicles having PUC will be allowed for carrying mining materials.
- ) Noise level will be maintained within permissible limit (silent zone-50dB (A) during day time or residential zone 55dB (A)) as per noise pollution (regulation and control), rules, 2000, CPCB norms.

## 10.7 LAND ENVIRONMENT

Various components of land environment have been identified for study of impact of the mine operations. Details of the same are given below:

### **Solid waste generation and management**

No waste or top soil shall be generated during mining activities. All the quantities of mineral to be exploited shall be sending to crusher plant outside the area. Therefore generation of waste shall be nil & no



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proposal has been envisaged for its separate dumping.

### **Impact on land use & reclamation of mined out areas**

Opencast mining activities may alter the landscape of the lease area and also cause some disturbance to the surface features of the surrounding areas Of the entire lease area.

As the mineral is non-replenish able, the excavated area at the end of mine life will be converted into an open benched pit which will be used as water collecting pond. The measures to be taken are likely to bring forth positive impact on the core zone landscape. The aesthetic environment of the core zone will have a positive impact by the time mining ceases in the area with proposed green belt development.

## **10.8 AIR ENVIRONMENT**

### **Anticipated impacts and evaluation**

Information on air quality was studied and various modelling techniques predicted that the mining activity will not affect the air quality in a significant manner. In mining operations, loading, transportation and unloading operations may cause deterioration in air quality due to handling dry materials. In the present case, from the Air modelling results it is anticipated that the incremental pollution will remain within the limit and becomes insignificant outside the mine lease area. Also, the blasting is not prescribed and will be only done in the utmost requirement and that too for a very short duration of mere significance.

### **Mitigation measures**

The only air pollution sources are the road transport network of the trucks. The dust suppression measures like water spraying will be done on the roads. Utmost care will be taken to prevent spillage from the trucks. Overloading will

be prevented. Plantation activities along the roads will also reduce the impact of dust in the nearby villages.

## **10.9 WATER ENVIRONMENT**

### **Anticipated impacts and evaluation**

To find out the effect on ground water an extensive study has been conducted and from the study it can be safely concluded that there is no noticeable effect on surrounding ground water resource due to mining.

Mining of Building stone does not have any significant impact on the water quality and parameters as the mining does not intercept with the ground water level.

In this project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water from the river. There will not be any adverse impact on surface hydrology and ground water regime due to this project. The contractor will adhere to all guidelines and rules for proper and scientific method of mining during the period of extracting the building stone. Thus, the project activities shall not have any adverse effect on the physical components of the environment and therefore may not have any effect on the recharge of ground waters or affect the water quality.

## **10.10 NOISE ENVIRONMENT**

### **Anticipated impacts and evaluation**

Noise generated at the mine is due to semi-mechanized mining operations and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area.

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human beings, but when it is abnormally high- it incurs some maleficent effects.

In this case the impact of noise on the nearby settlements is negligible as they are far located from the mine workings.

### **Mitigation measures**

#### **On-site**

- a) **Blasting** only if required will be done by a licensed blaster.
- b) **Maintenance of Machinery:** Regular maintenance of machinery will keep the generated noise level below the minimum prescribed limit i.e. not exceeding 90 dB (A) at a distance of 2 m from the machine. All machines will be as per stipulated standards and will be used at their optimum capacity.
- c) **Trained Operators:** Only trained operators will be allowed to operate machines during mining to reduce any chance of safety failures.
- d) **Vegetation:** Plantation will be carried in the outer portion of the lease area.
- e) **Hearing Protection:** All the miners will be provided with Personal Protective equipments such as ear-muffs.
- f) **Phasing out** the old and worn out trucks.

### **10.11 TRAFFIC ANALYSIS**

From the analysis it can be seen that the LOS is not likely to change near village Girwan which is A i.e. Excellent is and LOS at intersection of MDR 11B changes to 0.08 which is "A" i.e. 'Excellent' respectively, as per classification of ENVIS Technical Report, IISc, Bangalore.

### **10.12 SOCIO-ECONOMIC ENVIRONMENT**

The implementation of the Building stone mining project will throw opportunities to local people for both direct and indirect employment. Since the quarries will be leased out to successful allottees, building stone mining operation in the state will get legalized and it will fetch income to the state exchequer. The project will also provide impetus to industrialization of the area. With the implementation of the proposed mining project the occupational pattern of the people in the area will

change making more people engaged in industrial and business activities rather in agriculture. Thus there will be a gradual shifting of population from agriculture to mining and industry. Further, the mining and industrial activities in the area may lead to rapid increase in population and thereby urbanization. Due to urbanization of the area, employment opportunities will further increase.

### **10.13 ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

Proper environmental management plan is proposed for Granite, Khanda, Gitty, Boulder Mine project to mitigate the impact during the mining operation.

- ) No overburden or loose sediments will be kept in the working benches particularly during monsoon months.
- ) The possibility of the project activity contributing to the pollution of watercourses of the region or to the ground water regime is so less that this does not significantly constitute an area of concern.
- ) Construction of well-compacted roads.
- ) Regular water spraying on haul roads and waste dumps by tankers.
- ) Provision of dust collectors for the drilling & crusher machines.
- ) Controlled blasting (if any).
- ) Supply of personal protective equipments like dust masks, earplugs, helmets, safety boots etc. for the miners.
- ) Plantation of wide leaf trees, creepers, tall grasses around quarry sites, waste dumps, road and other surrounding barren zones.
- ) Proper and regular maintenance of vehicles, compressors and jack hammers.
- ) Provision of supplying earplugs for jackhammer drillers and crusher operators.
- ) Care should be taken that noise produced during vehicles movement for carrying building stone is within the permissible noise level.

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- ) Carrying of blasting (if any) only during daytime (not during cloudy weather and when strong wind is blowing towards residential areas). Blasting will be carried out with limited explosives at a time so that the noise generation can be well maintained with the prescribed limits.
  - ) Provision of Green Belt (thick foliage) along the lease boundary and road.
  - ) Strict observance of the provisions of Acts, Rules and Regulations in respect of safety both by management and the workers.
  - ) Proper planning and designing of work in order to reduce the risk of hazards.
  - ) Specific instructions and supervisions of working where danger due to fall of side (overhanging, undercutting of bench, fall of objects from higher benches/places is apprehended).
  - ) Training of work persons and the officials.
  - ) Since the haul road will be of considerable length, due importance will be given in the construction of road. The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
  - ) A code of practices for tipping in stock piles/dumping of overburden at dump yard and loading point will be implemented.
  - ) In respect of contract work, safety code for contractors and workers will be implemented.
  - ) They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centre. All personal protective equipments will be supplied to them.
  - ) A code of practice for fighting fire will be implemented.
  - ) Competent persons like fitters, mechanics will imparted with special attention to project impact.

- 
- ) The safe handling of materials while attending to repairs, maintenance of HEMM.
  - ) Provision of pit safety committee meeting every month (20th day) to discuss the safety of the mines and the persons employed.
  - ) Celebration of annual mines safety week and environmental week in order to develop safety awareness amongst employees.
  - ) Pre joining medical check-up shall be done and regular health check-up in 6 monthly interval is planned for the employees.
  - ) If some causality or injury to animal occurs, it should be informed to forest department and proper treatment should be given.
  - ) Corridor movement of wild mammals (If exists) should be avoided.

#### **10.14 ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION**

Environmental Management Plan serves no purpose if it is not implemented with true spirit. Some loopholes in the EMP can also be detected afterwards when it is implanted and monitored. Thus, an implementation and monitoring programme has to be prepared.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management should strengthen the existing control measures as elaborated earlier in this report and monitor the efficacy of the control measures implemented within the mining area relating to the following specific areas:

- a) Collection of air and water samples at strategic locations with frequency suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.

- b) Collection of soil samples at strategic locations once in every year and analysis thereof with regard to deleterious constituents, if any.
- c) The effectiveness of drainage system depends upon proper cleaning of all drains provided in the surrounding of mine area. Any blockage due to siltation or loose material will be checked at least once in a month.
- d) Measurement of water level fluctuations in the nearby ponds dug wells and bore wells.
- e) Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done in every quarter of the year.
- f) Plantation/afforestation as should be done as per program. Regular watering of plant and fencing to protect them from cattle/goats has to be provided. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people should also be involved.

Mine management will be in regular touch with local surrounding villages to update the various developmental schemes made by them. They will also consider any immediate requirement, which could be taken care of in near future.

Mine management will be in regular touch with State Pollution Control Board and Mines Dept. and send them annual progress report. Any new regulations considered by State/Central Pollution Control Board for the industry will be taken care of.

**Table – 10.5: Budget Allotted for the Project Operation & Environmental Management Plan**

S.No	Description	Unit	Total (Rs.)
<b>A. Project Operation Cost</b>			

<b>1</b>	Manpower Cost:	(Total Man power -30)	38,10,000
<b>2</b>	Expenditure on Occupational Health: PPE & First Aid Facility Medical checkup and Medicine (Once in a month)		3,15,000
<b>3</b>	Cost of infrastructure, Equipment, Vehicles etc.		13,00,000
<b>4</b>	EMP Cost		4,88,000
	<b>Total Amount</b>		59,13,000
<b>EMP BREAK UP</b>			
<b>Sl. No.</b>	<b>Measures</b>	<b>Capital Cost (In Rs.)</b>	<b>Recurring Cost (In Rs.)</b>
1	Pollution Control Dust Suppression		2,08,000
2	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	-- -- -- --	30,000 20,000 30,000 20,000
3	Green belt development	1,20,000	30,000
4	Haul road maintenance	--	30,000
5	CER Cost (Included in EMP Cost as per OM dated 30 Sep 2020)	1,20,000	
	<b>Total</b>	<b>2,40,000</b>	<b>3,68,000</b>

**10.15 MONITORING SCHEDULE AND PARAMETERS**



**Table 10.6: Monitoring Schedule and Parameters**

S.No.	Description of Parameters	Schedule and Duration of Monitoring
1	Air Quality a)In the vicinity of the mine b)In the vicinity of the transportation network	24 hourly samples twice a week for one month in each season except monsoon season.
2	Water Quality a)Water quality of surface and groundwater around the site b)Drinking water must conform to drinking water standards	Once in a season for 4 season in a year.
3	Ambient Noise Level	Twice in a year for couple of years & then once in a year.
4	Soil Quality	Once in two years on project monitoring area.
5	Inventory of Flora(tree plantation, survival etc)	Once in two years on project monitoring area.
6	Socio-economic condition of local, population, physical survey	Once in 3 or 4 years.

## 10.16 BENEFIT OF MINING

### PHYSICAL BENIFITS

The opening of the proposed project will enhance the following physical infrastructure facilities in the adjoining areas.

- Road Transport:** There will be improved road communication due to the proposed project and maintenance will also be done time to time.
- Market:** Generating useful economic resource for construction. Excavated mineral will provide a good market opportunity.
- Enhancement of green cover:** As a part of reclamation plan, plantation will be carried along the river banks or along the road sides or near the civic amenities.

- a. **Creation of community assets** (infrastructure) like provision for drinking water, construction of school buildings, village roads/ linked roads, dispensary & health centre, community centre, market place etc, as a part of corporate social responsibility.

### **SOCIAL BENEFITS**

- a) **Increase in Employment** Potential due to the project activity. Employment opportunities will increase both directly as well indirectly.
- b) **Contribution to the Exchequer** as the saleable minerals will be given royalty. Since the quarries will be leased out to successful allottees, mining operation in the state will get legalized and it will fetch income to the state exchequer.
- c) **Increased Health related activities:** Healthcare promotional activities will be undertaken. Pre-placement & and Periodic medical checkups will be done, which will lift the general health status of the residents of the area. Health camps, medical aids, family welfare programs, immunization camp sports will be arranged.
- d) **Educational attainments:** Educational activities will be promoted by the lessee. Awareness program will be arranged covering basic issues related to primary level education, environment, health and hygiene etc.
- e) **Strengthening of existing community** facilities through the Community Development Programme.

### **ENVIRONMENTAL BENEFITS**

#### **ENHANCEMENT OF GREEN COVER**

Plantation/afforestation will be done as per program 100 plants will be planted in 5 year mining period. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
 District- Banda, Uttar Pradesh  
 Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
 Prop.M/S Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP  
 CHAPTER-X: EXECUTIVE SUMMARY

people will also be involved. The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation.

The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains.

### 10.17 CORPORATE SOCIAL RESPONSIBILITY

**Table 10.7: Budget for Corporate Environmental Responsibility (CER)**

S. No.	Activity	Capital Cost (In Rs.)	Quantity
1.	Construction of toilet at Pt. J.N. Inter College at Village Girwan	30,000	1 Toilet By May,2022
2.	Distribution of solar lamp at Village Girwan	30,000	25 solar lamp by Dec, 2022
3.	Installation of water storage tank in school at Village Girwan	30,000	3 Water tank of 1000L Capacity
4.	Distribution of sanitary items in nearby village Girwan	30,000	-
	<b>TOTAL</b>	<b>1,20,000</b>	



Chapter-11

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Disclosure of Consultants

# CHAPTER- XI: DISCLOSURE OF CONSULTANTS ENGAGED



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
 District- Banda, Uttar Pradesh  
 Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
 M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP

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 M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP

## CHAPTER- XI: DISCLOSURE OF CONSULTANTS ENGAGED

**CHAPTER- XI****CONSULTANTS ENGAGED**

The consultant engaged for the preparation of the EIA/EMP of the project is M/s Cognizance Research India Private Ltd. The information about the company with address is as follows:

Basic Information about the Consultant Engaged is as follows stated below:

Name of the Consultant	Cognizance Research India Private Ltd.
Address	GT-20, Sector – 117, Noida -201301 – U.P
Credentials	Accredited by QCI/NABET

Personnel involved in the preparation of EIA/EMP report are stated below:

<b>Sr. No.</b>	<b>Name</b>	<b>EC/FAE</b>	<b>Details</b>
01	Mr. Ankur Sharma	EC	EIA Coordinator (Mining of minerals opencast).
02	Mr. Nimish Singhvi	FAE	AP, SHW & GEOLOGY
03	Mr. Vineet Pandey	FAE	SE
04	Ms. Neha	FAE	AQ & NV
05	Mr. Ankur Sharma	FAE	WP
05	Ms. Pooja	FAE	EB
06	Mr. Chakor Gedam	FAE	RH
07	Dr.P Radhakrishna Moorthy	FAE	HG & LU



Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
 Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
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 M/s Bajrang Road Lines  
 Partner-Shri Suresh Pratap Singh

EIA/EMP  
 CHAPTER- XI: DISCLOSURE OF CONSULTANTS ENGAGED

Accreditation Certificate of the Consultant Engaged:



**Quality Council of India**

National Accreditation Board for  
Education & Training

**CERTIFICATE OF ACCREDITATION**



**Cognizance Research India Pvt. Ltd.**  
 GT-20, Sector-117, Noida, Uttar Pradesh-201301

Accredited as **Category- A** organization under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations: Version 3 for preparing EIA-EMP reports in the following Sectors:

Sl. No.	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast and underground mining	1	1 (a) (ii)	A
2	Building and construction projects	38	5 (a)	B

*Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RA AC minutes dated November 8 and Supplementary FC minutes dated December 6, 2019 posted on QCI-NABET website.*

*The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/20/1231 dated February 11, 2020. The accreditation needs to be renewed before the expiry date by Cognizance Research India Pvt. Ltd., Noida, following due process of assessment.*

  
 Sr. Director, NABET  
 Dated: February 11, 2020

Certificate No.  
 NABET/ EIA/1922/ RA 0151

Valid till  
 February 3, 2022

For the updated List of Accredited EIA Consultants Organizations with approved Sectors, please refer to QCI-NABET website.



Consultant-Cognizance Research India Pvt Ltd

*Suresh*

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Proposed Girwan Granite, Khanda, Gitty, Boulder Mining Project  
Gata No. 1876 (Khand No.4), Village- Girwan , Tehsil- Naraini  
District- Banda, Uttar Pradesh  
Area-1.21 Ha, Production-12100m<sup>3</sup>/yr  
M/s Bajrang Road Lines  
Partner-Shri Suresh Pratap Singh

EIA/EMP  
CHAPTER- XI: DISCLOSURE OF CONSULTANTS ENGAGED

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**Consultant Contact Details:**

**Cognizance Research India Private Ltd.**

**Address – GT – 20, Sec – 117, Noida – 201301**

**Mobile no. - +919910047760**

**Email id – [cripl.info@gmail.com](mailto:cripl.info@gmail.com)**

**Website – [www.cognizanceindia.com](http://www.cognizanceindia.com)**



Consultant-CognizanceResearch India Pvt Ltd

*Suresh*

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**ANNEXURE I**  
**TOR**

# State Level Environment Impact Assessment Authority, Uttar Pradesh

## Directorate of Environment, U.P.

Vineet Khand-1, Gomti Nagar, Lucknow - 226 010

Phone : 91-522-2300 541, Fax : 91-522-2300 543

E-mail : doeuplko@yahoo.com

Website : www.seiaaup.com

To,

M/s Bajrang Road Lines,  
Village and Post- Mau, 584, Katra Lalganj,  
Tehsil- Gauriganj, District- Amethi, U.P.

Ref. No.....831...../Parya/SEAC/6104/2019

Date: 22 March, 2021

**Sub:** Terms of Reference for Girwan Granite, Khanda, Gitty, Boulder Mining project at Gata No. 1876 (Khand 04), Village- Girwan, Tehsil- Naraini, District - Banda, U.P., of M/s Bajrang Road Lines, (Leased Area 1.21 ha).

Dear Sir,

Please refer to your application/letter dated 02-01-2021 & 09-02-2021 addressed to the Secretary, SEAC, Directorate of Environment, U.P., Lucknow on the subject as above. The matter was considered by the State Level Expert Appraisal Committee in its meeting held on dated 18-02-2021 and SEIAA in its meeting dated 02-03-2021.

A presentation was made by the project proponent along with their consultant M/s Cognizance Research India Pvt. Ltd. The proponent, through the documents submitted and the presentation made informed the committee that:-

1. The environmental clearance is sought for Girwan Granite, Khanda, Gitty, Boulder Mining project at Gata No. 1876 (Khand 04), Village- Girwan, Tehsil- Naraini, District - Banda, U.P., of M/s Bajrang Road Lines, Partner- Shri Suresh Pratap Singh, (Leased Area 1.21 ha).
2. Salient features of the project as submitted by the project proponent:

On-line proposal No.	SIA/UP/MIN/59601/2021		
File No. allotted by SEIAA, UP	6104		
Name of Proponent	M/s Bajrang Road Lines Partner- Shri Suresh Pratap Singh		
Full correspondence address of proponent and mobile No.	R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, (U.P.)		
Name of Project	Girwan Granite, Khanda, Gitty, Boulder Mining project		
Project location (Plot/Khasra/Gata No.)	Gata No. 1876 (Khand 04)		
Name of River	-		
Name of Village	Girwan		
Tehsil	Naraini		
District	Banda		
Name of Minor Mineral	Granite, Khanda, Gitty, Boulder Mining project		
Sanctioned Lease Area (in Ha.)	1.21		
Max & Min mRL within lease area	Max- 152.10 mRL and Min- 142.20 mRL		
Pillar Coordinates (Verified by DMO)	<b>Sanctioned Mining Lease Area</b>		
	<b>Pillar No.</b>	<b>Latitude</b>	<b>Longitude</b>
	A	25°18'24.06"N	80°23'0.21"E
	B	25°18'25.48"N	80°23'5.07"E
	C	25°18'22.37"N	80°23'6.04"E
	D	25°18'22.37"N	80°23'2.64"E
	E	25°18'21.52"N	80°23'2.35"E
F	25°18'22.24"N	80°23'0.67"E	
Total Geological Reserves	5,28,282 cum		
Total Mineable Reserves in LOI	12,100 cum		
Total Proposed Production	60,500 cum		

Proposed Production/year	12,100 cum	
Sanctioned Period of Mine lease	Maximum 10 years (Mining plan prepared for 5 years)	
Production of mine/day	46.53	
Method of Mining	Open Cast Semi-mechanized Method	
No. of working days	260 days	
Working hours/day	8 hrs	
No. of workers	30	
No. of vehicles movement/day	7	
Type of Land	Government waste land	
Ultimate Depth of Mining	24	
Nearest metalled road from site	1.4 km	
Water Requirement	PURPOSE	REQUIREMENT (KLD)
	Drinking	0.30
	Suppression of dust	7.18
	Plantation	0.20
	Others (if any)	-
	Total	7.68
Name of QCI Accredited Consultant with QCI	Cognizance Research India Pvt Ltd.	
No and period of validity.	1922, validity= 03-02-2022	
Any litigation pending against the project on land in any court	No	
Details of 500 m Cluster Map & certificate issued by Mining Officer	Yes, certified	
Details of Lease Area in approved DSR	Yes, given in the DSR	
Proposed CER cost	Rs 1,20,000/-	
Proposed EMP cost	Rs 3,88,000 /-	
Length and breadth of Haul Road	Length: 0.59 km, width: 6 m	
No. of Trees to be Planted	100 plants	

3. The mining would be restricted to unsaturated zone only above the phreatic water table and will not intersect the ground water table at any point of time.
4. The mining operation will not be carried out in safety zone of any bridge or embankment or in eco-fragile zone such as habitat of any wild fauna.
5. There is no litigation pending in any court regarding this project
6. The project proposal falls under category-1(a) of EIA Notification, 2006 (as amended).

The committee discussed the matter and recommended to issue following terms of reference (TOR) for the preparation of EIA.

1. All pages of technical documents/EIA/EMP etc. should be signed by the consultant and project proponent both.
2. Copy of all the analysis reports duly signed by analyst approved by NABL or MoEF&CC shall be annexed with the EIA report and original analysis reports should be presented at the time of presentation.
3. MOU signed between the project proponent and the consultant should be submitted.
4. The project proponent shall obtain the forest clearance and permission of Central and State Government as per law under the provisions of Forest (conservation) Act, 1980 and submit along with EIA.
5. The lease area its address and production per annum should match with as mentioned in DSR and Lol. In case there is any difference clarification/ amendment letter from competent authority shall be submitted along with EIA. EIA and public hearing shall be conducted as per the lease area its address and production per annum mentioned in DSR and Lol.
6. Public hearing shall be conducted as per EIA notification, 2006 (as amended).
7. SEIAA opined that the project proponent shall submit permission of CGWA or proposal for alternative source of fresh water.
8. Revised form-1 in terms of geo-coordinates C&D.
9. Verified geo-coordinates.

10. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
11. A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
12. All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
13. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
14. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
15. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
16. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
17. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
18. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
19. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
20. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
21. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
22. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
23. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
24. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
25. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
26. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/

- Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
27. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
  28. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
  29. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
  30. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
  31. One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
  32. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
  33. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
  34. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
  35. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
  36. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
  37. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground

- water and for pumping of ground water should also be obtained and copy furnished.
38. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
  39. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
  40. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
  41. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
  42. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
  43. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
  44. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
  45. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
  46. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
  47. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
  48. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
  49. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
  50. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
  51. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
  52. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
  53. Besides the above, the below mentioned general points are also to be followed:-
    - a. Executive Summary of the EIA/EMP Report
    - b. All documents to be properly referenced with index and continuous page numbering.
    - c. Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
    - d. Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
    - e. Where the documents provided are in a language other than English, an English translation should be provided.
    - f. The Questionnaire for environmental appraisal of mining projects as devised earlier by the



**ANNEXURE II**  
**Letter of intent (LOI)**

काटसप / इ-मल / पजाकृत

**कार्यालय जिलाधिकारी, बाँदा।**  
(खनिज अनुभाग)

पत्रांक : 2330 / खनिज-30, बाँदा

दिनांक : 31/12/2020

**सहमति-पत्र (लेटर ऑफ इन्टेंट)**

श्री बजरंग रोड लाइन्स  
पता-करनपुर, नियर कुण्डनगंज,  
रेलवे स्टेशन, जिला रायबरेली।  
पिनकोड-229001  
पार्टनर श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह  
निवासी-ग्राम व पो 0 मऊ, 584, कटरा लालगंज, तहसील गौरीगंज,  
जिला अमेठी। पिनकोड-227409

भूतत्व एवं खनिकर्म विभाग, उ०प्र०, शासन लखनऊ के शासनादेश संख्या-3236/86-2017/57(सा)/2017 दिनांक 12.12.2017 एवं शासनादेश संख्या-2169/86-2019-57(सा०)/2017 टी०सी०-1 दिनांक 09.10.2019 में दिये गये निर्देशानुसार ई-निविदा सह ई-नीलामी प्रणाली के माध्यम से उ०प्र० उपखनिज (परिहार) नियमावली-1963 के अध्याय-4 के अन्तर्गत खनन पट्टा पर स्वीकृत किये जाने हेतु विज्ञप्ति सं०-69/खनिज-30, बाँदा दिनांक 27.01.2020 जारी की गयी। उपरोक्त विज्ञप्ति के क्रम में आप द्वारा जनपद बाँदा की तहसील नरैनी स्थित ग्राम-गिरवां के गाटा सं०-1876 (खण्ड सं०-4) रकबा 1.21 हे० में मात्रा 12,100 घनमीटर प्रतिवर्ष उपलब्ध उपखनिज ग्रेनाइट, गिट्टी, खण्डा, बोल्टर हेतु मु० 331.00 रू० प्रति घनमीटर की दर से ई-निविदा सह ई-नीलामी में बोली दी गयी है, जो कि सर्वाधिक है। जिलाधिकारी महोदय के आदेश दिनांक 20.06.2020 द्वारा उक्त खनन पट्टा स्वीकृत किये जाने की अनुमति प्रदान कर दी गयी है।

शासनादेश दिनांक 09.10.2019 के बिन्दु सं०-10(2) के अनुसार "लेटर आफ इन्टेंट प्राप्त होने के उपरान्त 02 कार्य दिवस के अन्दर प्री-बिड अर्नेस्ट मनी को समायोजित करते हुये पट्टे के प्रथम वर्ष के लिये निर्धारित पट्टा धनराशि रू० 40,05,100.00 (12100 x 331) का 50 प्रतिशत के समतुल्य धनराशि रू० 20,02,550.00 (25 प्रतिशत प्रतिभूति एवं 25 प्रतिशत प्रथम वर्ष की प्रथम किस्त के रूप में) निर्धारित लेखा शीर्षक के अन्दर जमा किया जाना होगा। यदि सफल बोलीदाता/निविदादाता उक्त धनराशि जमा करने में असफल होता है तो उसके द्वारा जमा अर्नेस्ट मनी जब्त कर ली जायेगी और उसके द्वारा इस सम्बन्ध में कोई शिकायत अथवा प्रत्यावेदन विचार योग्य नहीं होगा।"

शासनादेश दिनांक 09.10.2019 में दी गयी शर्तें :-

- (1) प्रथम वर्ष के लिए देय नीलामी/पट्टा धनराशि की गणना पट्टा क्षेत्र के लिये विज्ञप्ति में निर्धारित मात्रा घन मी० को ई-निविदा/ई-नीलामी की दर रूपया प्रति घन मी० से गुणा कर निकाली जायेगी। खनन पट्टा के अनुवर्ती वर्षों में प्रत्येक वर्ष पिछले वर्ष की नीलामी की देय धनराशि पर 10 प्रतिशत की वार्षिक वृद्धि की जायेगी तथा तदनुसार अनुवर्ती वर्षों की नीलामी धनराशि में वृद्धि होगी, तदनुसार प्रत्येक वर्ष निर्धारित नीलाम की धनराशि को नियमावली-1963 के चतुर्थ अनुसूची के अनुसार त्रैमासिक किस्त अग्रिम रूप से जमा की जायेगी।
- (2) प्रस्तावक को नियम-17 के प्रावधानों के अनुसार रू० 8,000.00 जमा कराकर क्षेत्र का सीमांकन कराएगा, जिसमें सीमा बिन्दुओं का जियो-कोर्डिनेट्स भी इंगित किया जायेगा तथा नियम-35 के अनुसार सीमा स्तम्भ लगायेगा तथा इसका अनुरक्षण करेगा।
- (3) लेटर आफ इन्टेंट जारी होने के एक माह के अन्दर अनुमोदित हेतु देय प्रतिभूति एवं प्रथम किस्त की धनराशि जमा होने के प्रमाण सहित, खनन योजना निदेशक, भूतत्व एवं खनिकर्म के समक्ष प्रस्तुत किया जायेगा। अनुमोदित खनन योजना प्राप्त होने के एक माह के अन्दर सक्षम प्राधिकरण के समक्ष पर्यावरण अनापत्ति प्रमाण-पत्र हेतु प्रस्ताव प्रस्तुत किया जाना अनिवार्य होगा।

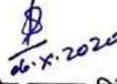
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(2)

- (4) पर्यावरण अनापत्ति प्रमाण-पत्र प्राप्ति के एक माह के भीतर पट्टा विलेख का निष्पादन किया जाना होगा। पट्टा विलेख के निष्पादन के दिनांक से 03 माह के भीतर खनन संक्रियायें प्रारम्भ की जानी हैं।
- (5) प्रस्तावक द्वारा नियम-34 के अनुसार क्षेत्र के भूमि-उद्धार और पुर्नवासन उपाय हेतु वित्तीय आश्वासन की धनराशि ₹0 2,00,000.00 की बैंक गारण्टी एफ0डी0आर0, जो जिलाधिकारी बाँदा के पक्ष में 10 वर्ष के लिये बंधक हो, को जमा करेगा।
- (6) प्रस्तावक को भारतीय स्टाम्प अधिनियम के प्राविधानों के तहत निर्धारित स्टाम्प पर पट्टा विलेख का निष्पादन कराने के पश्चात ही उपखनिजों के खनन एवं परिवहन की अनुमति होगी।

अतः आपको निर्देशित किया जाता है कि सहमति पत्र (लेटर ऑफ इन्टेंट) प्राप्ति के दो कार्य दिवस के अन्दर प्रथम वर्ष हेतु निर्धारित पट्टा की सकल धनराशि का 50 प्रतिशत के समतुल्य धनराशि ₹0 20,02,550.00 (बीस लाख दो हजार पांच सौ पचास रुपये मात्र) में जमा अर्नेस्ट मनी ₹0 4,84,000.00 को समायोजित करते हुये अवशेष धनराशि ₹0 15,18,550.00 (पंद्रह लाख अठारह हजार पांच सौ पचास रुपये मात्र) को जनपद के निर्धारित लेखा शीर्षक "0853-अलौह-खनन तथा धातुकर्म उद्योग-102 खनिज रियायत शुल्क किराया और स्वत्व शुल्क-01 खनिज रियायत शुल्क किराया और स्वत्व शुल्क" में जमा कर चालान की मूलप्रति खनिज कार्यालय, बाँदा में उपलब्ध कराना सुनिश्चित करें। यदि विनिर्दिष्ट अवधि में उक्त धनराशि को जमा नहीं किया जाता है तो आपके पक्ष में निर्गत सहमति पत्र को निरस्त करते हुये आप द्वारा जमा अर्नेस्ट मनी की धनराशि को राज्य सरकार के पक्ष में जब्त कर लिया जायेगा, जिसके लिये उत्तरदायी आप स्वयं होंगे।



(संतोष बहादुर सिंह)  
अपर जिलाधिकारी (वि0/रा0)/  
कृते जिलाधिकारी, बाँदा।

पत्रांक व दिनांक तदैव।

प्रतिलिपि : निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. सचिव, भूतत्व एवं खनिकर्म विभाग, उ0प्र0 शासन, लखनऊ।
2. निदेशक, भूतत्व एवं खनिकर्म निदेशालय, उ0प्र0, लखनऊ।
3. शाखा प्रबन्धक, एम0एस0टी0सी0 लिमिटेड, द्वितीय तल सेन्टर कोर्ट बिल्डिंग 5, पार्क रोड हजरतगंज, लखनऊ।

  
अपर जिलाधिकारी (वि0/रा0)/  
कृते जिलाधिकारी, बाँदा।

**ANNEXURE III**  
**Approved Mining Plan**

प्रेषक,

निदेशक,

भूतत्व एवं खनिकर्म निदेशालय, उ०प्र०,  
खनिज भवन, लखनऊ।

सेवा में

जिलाधिकारी

बाँदा।

संख्या:- 1419 / मा० प्लान / 2017

दिनांक 27/11/2020

विषय:- पट्टाधारक श्री बजरंग रोड लाइन्स पार्ट० श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह के पक्ष में स्वीकृत जनपद बाँदा में तहसील नरैनी ग्राम-गिरवाँ गाटा स०-1876 (खण्ड संख्या-4), क्षेत्रफल 1.21 हे० में उपखनिज ईमारती पत्थर (ख०बो०/गि०बो०) के खनन पट्टे हेतु प्राप्त खनन योजना का अनुमोदन के संबंध में।

महोदय,

उपर्युक्त विषय के संदर्भ में सूचित करना है कि उक्त संदर्भित क्षेत्र के संबंध में पट्टाधारक श्री बजरंग रोड लाइन्स पार्ट० श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह द्वारा प्रस्तुत खनन योजना का अनुमोदन उत्तर प्रदेश उप-खनिज (परिहार) नियमावली, 1963 के नियम-34 के उपनियम (4) के अधीन प्रदत्त अधिकारों का प्रयोग करते हुये दिनांक 27.11.2020 को कर दिया गया है।

1- "खनन योजना" का अनुमोदन निम्नलिखित शर्तों के अधीन किया गया है:-

- (अ) "खनन योजना" का अनुमोदन खनन पट्टा विलेख निष्पादन के दिनांक से आगामी 05 वर्ष अवधि तक के लिए अनुमोदित किया जाता है। खनन क्षेत्र से 12100 घन मी० प्रतिवर्ष खनिज का उत्पादन अनुमन्य किया गया है।
- (ब) अनुमोदित अवधि में किये गये खनन कार्य के निरीक्षण के उपरान्त यदि खनन योजना में संशोधन हेतु आदेश दिये जाते हैं, तब संशोधित खनन योजना प्रस्तुत करने का पूर्ण उत्तरदायित्व पट्टेदार का होगा।
- (स) आबद्ध नियोजित श्रमिकों को सुरक्षात्मक उपकरण प्रदान करने तथा सुरक्षित खनन कार्य करने हेतु सभी आवश्यक सावधानियां बरतने का दायित्व पट्टेदार का होगा।
- (द) अनुमोदित खनन योजना की एक-एक प्रमाणित प्रति संबंधित जिलाधिकारी कार्यालय एवं निदेशालय के क्षेत्रीय कार्यालय में अभिलेखार्थ यथाशीघ्र प्रस्तुत करने का दायित्व भी पट्टेदार का होगा।
- (च) अनुमोदित खनन योजना में विनिहित प्रक्रिया के अनुसार पट्टेदार द्वारा खनन कार्य न किये जाने के पाये जाने पर पट्टेदार के विरुद्ध पट्टे की शर्त का उल्लंघन माना जायेगा और तदनुसार कार्यवाही की जायेगी।
- (छ) खनन योजना को निम्नलिखित अतिरिक्त शर्तों के साथ अनुमोदित किया जाता है:-
  1. बेंच की ऊँचाई अधिकतम 06 मी० एवं बेंच की चौड़ाई उँचाई से कम से कम दो गुनी होनी चाहिए।
  2. खनन कार्य ऊपर से नीचे की ओर बेंच बनाते हुये किया जायेगा।
  3. खनन कार्य के दौरान निकाले गये मलवे विशेषकर टॉप स्वायल को व्यवस्थित रूप से एकत्रित कर रखा जायेगा।
  4. फेस का ढलान 60 डिग्री से अधिक न हो, और कहीं पर भी अण्डर कटिंग न हो।

5. प्रत्येक ब्लास्टिंग के बाद फेस ड्रेसिंग कराना होगा ताकि लूज पत्थर आदि से श्रमिक सुरक्षित रहें।
  6. खनन कार्य के फलस्वरूप बने गड्ढे को मलवा भरकर समतल कर वृक्षारोपण करना होगा।
  7. खनन कार्य स्थल पर फर्स्ट एड बाक्स व स्ट्रेचर रखे जाये।
  8. श्रमिकों के लिये श्रमिक विश्राम गृह उनके पीने के पानी आदि की समुचित व्यवस्था की जाये।
  9. खनन में सिलिका से उत्पन्न होने वाली बीमारी की सम्भावना के दृष्टिगत प्रत्येक छः माह में श्रमिकों की चिकित्सीय जांच का प्राविधान रखा जाना चाहिए तथा आवश्यकतानुसार चिकित्सा सुविधा उपलब्ध कराया जाना चाहिए।
  10. पर्यावरण स्वच्छता के संबंध में भारत सरकार/राज्य सरकार द्वारा समय-समय पर जारी दिशानिर्देशों एवं माननीय न्यायालय के आदेशों का अनुपालन पट्टाधारक द्वारा किया जायेगा।
- 2- अस्तु आपसे अनुरोध है कि अनुमोदित खनन योजना की संलग्न मूल प्रति सम्बन्धित पट्टेदार को अनुपालन हेतु उपलब्ध करा कर उनसे प्राप्ति रसीद प्राप्त कर निदेशालय को भिजवाने का कष्ट करें।  
संलग्नक: यथोपरि।

भवदीय,

  
(अनिल कुमार शर्मा)  
मुख्य खान अधिकारी  
कृते निदेशक।

संख्या: / (1)/मा0 प्लान/2017 तद दिनांक।

प्रतिलिपि:—निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :-

- 1- खान अधिकारी, भूतत्व एवं खनिकर्म विभाग, उ०प्र०, जनपद-बोंदा।
- 2- पट्टाधारक श्री बजरंग रोड लाइन्स पार्ट० श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह नि० ग्राम व पो० मऊ, 584 कटरा लालगंज तहसील गौरीगंज जिला अमेठी।
- 3- खनन अनुभाग, भूतत्व एवं खनिकर्म निदेशालय, उ०प्र०, लखनऊ।

  
(अनिल कुमार शर्मा)  
मुख्य खान अधिकारी  
कृते निदेशक।

**Mining Plan**

along

**Progressive Mine Closure Plan****COPY FOR LESSEE**

for

**Granite, Khanda, Gitty, Boulder****MINING PROJECT**

Located at

**Gata No. 1876 (Khand.04), 14/9/MP/**

dated. 27/11/20

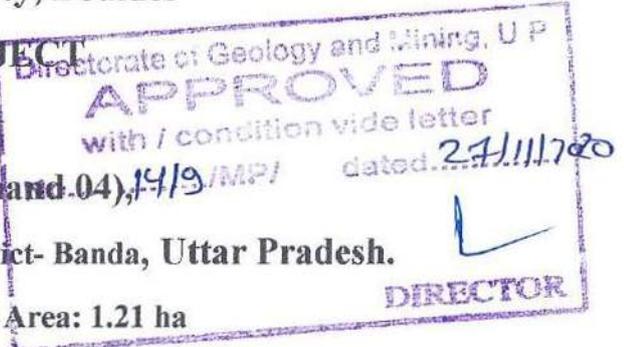
**Village- Girwan, Tehsil- Naraini, District- Banda, Uttar Pradesh.****Sanctioned Mining Lease Area: 1.21 ha****Period of Mining Plan- 5 years;****Proposed Annual Excavation Volume as per LOI: 12,100 cum/year****Proprietor/Lessee****M/s Shri Bajrang Road Lines**

**Partner- Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh**  
**R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj,**  
**District- Amethi, (U.P.)**

(अनिल कुमार वर्मा)  
 मुख्य खनन अधिकारी  
 भूखन एवं खनिकर्म विभाग  
 रा.प. लखनऊ

**Prepared By**  
**Sandeep Kumar**  
**RQP/UPDGM/No.014/2019**

**SANDEEP KUMAR**  
 RQP/UPDGM/No.014/Year 2019



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## PROGRESSIVE MINE CLOSURE PLAN

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1	AUTHORISATION LETTER BY THE LESSEE	1
2	COPY OF RQP CERTIFICATE	2
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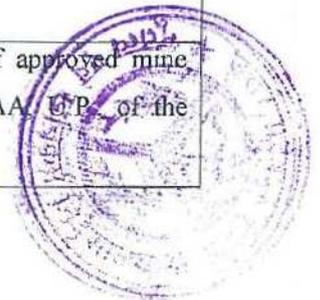
  
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## INTRODUCTION

The Mining lease for 10 years over an area of 1.21 ha (2.98 acre) is granted to M/s Shri Bajrang Road Lines Partner- Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, (U.P.) under Minor Mineral (Concession) Rule 1963 for the extraction of Granite, Khanda, Gitty, Boulder in Village- Girwan, Tehsil- Naraini, District- Banda (U.P.) at Gata No. 1876 (Khand- 04). The Mining Plan is being submitted Under Rule 34(4) of Uttar Pradesh Minor Mineral Concession Rule 1963.

The history of lease area grant, ownership etc. is as below:

S. No.	Particular	Details
1	Letter No./date of lease execution & lease period	As per LOI letter No. 2338/ Khanij- 30, Banda, Dated 06/10/2020, Mining Lease area granted for 10 years (Annexure No.1)
2	Date of first opening	It is a new mine and mining activities will start after the mining lease deed.
3	Letter No./date of first mining proposal & lapse period	As above under point No. 01
4	If lease expired date of renewal application/renewal status	Granted mining lease period 10 years
5	Present documents its proposal period & lapse period.	Mining plan prepared by RQP is being submitted for approval Under Rule 34(4) of U.P MMCR-1963 in DGM U.P., Lucknow.
6	Transfer details & date of transfer	Not applicable
7	Status of Environmental clearance	EC will be granted after submission of approved mine plan, Form- 1 & PFR etc. to the SEIAA, U.P. of the project.



  
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## CHAPTER-1

**1.0 GENERAL:****A) Name of the Lessee with Complete Address:**

M/s Shri Bajrang Road Lines Partner- Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, (U.P.), No fax & email address facilities is available with lessee.

**B) Status of Lessee: Private Individual.****C) Mineral, Occurring In The Area & Which Lessee Intends To Mine:**

Granite, Khanda, Gitty, Boulder

**D) Period for which the mining lease is granted:** The mining lease has been granted for the period of 10 years among which the mining plan for first 5 year is being prepared.**E) Name of R.Q.P. preparing the mining plans:**

Mr. Sandeep Kumar

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Copy of R.Q.P. registration is enclosed (Proforma No. 2).

**F) Name of prospecting agency:**

The lease area prospected by Partner- Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh, under the guidance of RQP

**Reference no & date of consent letter from the State Govt.**

The mining lease has been granted for the period of 10 years.



  
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## CHAPTER-2

## 2.0 LOCATION AND ACCESSIBILITY:

- (a) **Details of area ( with location map):** The lease hold falls in Village Girwan which is connected to MDR 11B approximately 1.4 km\*(E) Location map-Plate No. 1

**District and State:** Banda, Uttar Pradesh  
**Taluka/Tehsil:** Naraini  
**Village:** Girwan  
**Arazi No.** 1876 (Khand- 04)

**Geo-Coordinates**

Pillars	Latitude(N)	Longitude(E)
A	25°18'24.06"N	80°23'0.21"E
B	25°18'25.48"N	80°23'5.07"E
C	25°18'22.37"N	80°23'6.04"E
D	25°18'22.37"N	80°23'2.64"E
E	25°18'21.52"N	80°23'2.35"E
F	25°18'22.24"N	80°23'0.67"E

**Lease Area (ha):** 1.21 ha (2.98 acre)

**Whether the area is recorded to be in forest (please specify whether protected, reserved etc.)** The land is owned by State Govt. & State Govt. has given their consent for the exploitation of Granite, Khanda, Gitty, Boulder on lease for 10 years. The lease area is free from forest land

**Ownership/Occupancy:**

**Existence of public road / railway line, if any nearby and approximate distance:** Girwan which is connected to MDR 11 B approximately 1.4 km\* (E). Nearest Railway Station is Khurhand 11.5 km\* (E).

**Land use Pattern (Forest agricultural Barren etc.):** The existing land use of the area is non-agricultural, non forest, barren, rocky upland.

The planned land use is given in tabular form:

Sr. No.	Land use	Agriculture land (ha)	Forest Land (ha)	Waste land (ha)	Grazing Land (ha)
1	Mining pits Quarry	-	-	1.1353	-
2	Approach Road	-	-	0.06	-
3	Dumps	-	-	-	-
4	Office, Resht Shelter etc.	-	-	0.01	-
5	Balance undisturbed land	-	-	0.0047	-
	<b>Total</b>	-	-	<b>1.21</b>	-

  
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- b) Attach a general location map and vicinity map showing area boundaries and existing and proposed routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available the area should be shown on an accurate sketch map on a scale of 1:50,000: Location map attached showing lease (**Plate No. 1**)

#### INFRASTRUCTURAL – FACILITIES

- a) **Nearest Village** : Girwan, 0.5 km\* (NE)  
 b) **Nearest Township: Naraini-** 16.0 km\* (SE)  
 c) **Roads:** The lease connected by MDR 11B, at distance approximately 1.4 km\*(E)

#### **Water Supply:**

Surrounding village has numbers of wells & bores, which provide drinking water to Village Girwan is prominent water body in the region lies at 5 km.

#### **d) Electrification/Power:**

Girwan and surrounding villages has already receiving electric power. About 90% villages in 5 km. buffer zone are electrified.

#### **e) Educational – Facilities:**

Education facilities up to high school & intermediate are available in Naraini. For higher education facilities available at Banda.

#### **f) Health Service:**

The primary health Centre (PHC) is available at Girwan- 0.5 km\* (E)

#### **g) Railway Station:**

The nearest railway station is at Khurhand which is about 11.5 km\*(E)



  
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## CHAPTER-3

**3.0 GEOLOGY AND EXPLORATION:**

- a) Briefly describe the topography & general geology & local mine geology of the mineral deposit including draining pattern.

**TOPOGRAPHY:**

The general slope of applied area is from North to South direction. No seasonal & perennial drainage exists within the applied area. The highest and lowest point in the leasehold is 152.10 mRL and 142.20 mRL. The topography of lease area is shown in **Plate No. 03**.

**REGIONAL GEOLOGY:**

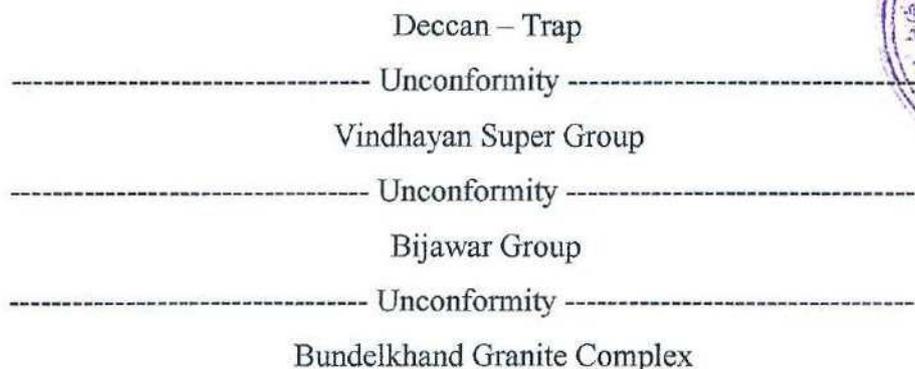
Geologically the area comprises Precambrian Bundelkhand granites unconfirmably overlain by Vindhyan are quaternary alluvium. The main and major drainage of the district are Yamuna, Ken and Baghain which are part of Yamuna river system.

Physiographically the area can be divided into three physiographic units–

- (1) Alluvial Plain
- (2) Marginal Alluvial
- (3) High Land (Hard rock) area..

The Bundelkhand Granite Gitty Complex occupies an area of 26,000 sq. of which 11,000 sq. km. lies in Lalitpur, Banda, Hamirpur and Banda Distt. of U. P. The granite complex in this region is essentially made of grey and pink granite rocks of granodiorite-adamellite composition with minor occurrences of hornblende diorite, gabbro, grey gneisses. These rocks are intruded by a number of quartz reefs mainly trending in NE-SW and basic dykes in NW-SE directions.

The Bundelkhand massif is overlain by rocks of Bijawar and Vindhyan group respectively. The stratigraphic order of superposition is as below:

**Geomorphology:**

The district is characterized by alluvial, hard rock as well as marginal alluvium. The district can be broadly classified into three physiographic units.

(i) The alluvial Plain, (ii) Marginal Alluvial, (iii) High Land Area..

**Soil:**

In Banda district loose sediments as well as black cotton soil is found. Black cotton soil is prominent in the central part. Four major type of soil a) Rakar, b) Mar, c) Kabar and d) Padua are dominant in the district.

**GEOLOGY OF LEASE AREA:**

The area is dominated by medium to fine grained, granite boulders. It usually occurs as boulder concentration dark grey in colors with porphyritic texture. Vein lets of quartz are also seen with the deposit. The upper layer shows signs of weathering.

**DETAILS OF EXPLORATION:**

**a) Carried out in the area:**

The proposed sanction mining lease area for the excavation of the mineral is for 10 years. The area is virgin land and the mine plan is prepared for the first 5 years tenure. The mining activities will be carried out after the grant EC. Hence, at present there is no pit in the mining lease area.

**b) Proposed to be carried out:**

The mining activities will be started after the grant of EC for which the mine plan is prepared and will be submitted for EC after the approval.

**METHOD OF ESTIMATION OF RESERVE:**

The reserve estimation has been done by cross-sectional method. Two cross-sections at an influence of 42 m & 36 m are drawn. The surface areas of cross-sections are multiplied by the cross-sectional strike influence to get the volume.

**Basis of estimation of reserve:**

- The bulk density of Building stone has been taken 2.8 in view of the past mining experience.
- The geological reserves have been computed through cross sectional area method.

**GEOLOGICAL RESERVES:**

The geological reserves estimated by cross-sectional method can be categorized in to two classes and shown in **Plate No: 04**

**a) Proved Reserves( UNFC CODE- 111):**

There is no exposed rock (outcrop) in the form of Building stone, Khanda, Gitti, Boulder therefore there is no outcrop to be considered as under proved category 111 along with the measured / estimated depth of 24 m below the surface level. Thus, in the entire category (111) is estimated accordingly up to a block of 34 m thickness.

**b) Probable Reserve (UNFC CODE- 122):**

  
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(i) The alluvial Plain, (ii) Marginal Alluvial, (iii) High Land Area..

**Soil:**

In Banda district loose sediments as well as black cotton soil is found. Black cotton soil is prominent in the central part. Four major type of soil a) Rakar, b) Mar, c) Kabar and d) Padua are dominant in the district.

**GEOLOGY OF LEASE AREA:**

The area is dominated by medium to fine grained, granite boulders. It usually occurs as boulder concentration dark grey in colors with porphyritic texture. Vein lets of quartz are also seen with the deposit. The upper layer shows signs of weathering.

**DETAILS OF EXPLORATION:**

**a) Carried out in the area:**

One trial pit having dimension of 5m\* 5m\* 5m were dug within lease area and later on all the trial pits have been converted into mining pits.

**b) Proposed to be carried out:**

The mining activities will be started after the grant of EC for which the mine plan is prepared and will be submitted for EC after the approval.

**METHOD OF ESTIMATION OF RESERVE:**

The reserve estimation has been done by cross-sectional method. Two cross-sections at an influence of 42 m & 36 m are drawn. The surface areas of cross-sections are multiplied by the cross-sectional strike influence to get the volume.

**Basis of estimation of reserve:**

- The bulk density of Building stone has been taken 2.8 in view of the past mining experience.
- The geological reserves have been computed through cross sectional area method.

**GEOLOGICAL RESERVES:**

The geological reserves estimated by cross-sectional method can be categorized in to two classes and shown in **Plate No: 04**

**a) Proved Reserves( UNFC CODE- 111):**

All Quantities of Building stone Sand Stone (Khanda, Gitti, Boulder) occurring 122 mRL below from the ground surface has been considered as under proved category.

**b) Probable Reserve (UNFC CODE- 122):**

  
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A 10 m. thickness below the proved reserve is considered as Probable mineral reserves.

**c) Feasibility in mineral resources (UNFC CODE- 341):**

The mineral block with statutory barrier with in proved zone has been not considered as 341.

**d) Pre-Feasibility in mineral resources (UNFC CODE- 222):**

Mineral blocked with in statutory barrier in probable zone has been not considered as 222.

The Summary of reserves is as below:

Thus, in the entire category is estimated accordingly up to a block of 34 m thickness

**DETAILS CALCULATION OF RESERVES AND RESOURCES**

**MEASURED MINERAL RESOURCES (331)**

Section line	Area (m <sup>2</sup> ) (111)	Area (m <sup>2</sup> ) (211)	Strike Influence (m)	Volume (cum)		In situ Reserves (Tonnes)		Total Quantities(m <sup>3</sup> ) (1.5 Swell factor)	
				111	211	111	211	111	211
1-1'	2694	650	42	113148	27300	316814.4	76440	169722	40950
2-2'	2442	592	36	87912	21312	246153.6	59673.6	131868	31968
<b>Total</b>				201060	48612	562968	136113.6	301590	72918

**INDICATED MINERAL RESOURCES (332)**

Section Line	Area m <sup>2</sup> (122)	Area m <sup>2</sup> (222)	Strike Influence (m)	Volume (cum)		In situ Reserves (Tonnes)		Quantities(m <sup>3</sup> ) (1.5 Swell Factor)	
				122	222	122	222	122	222
1-1'	706	600	42	29652	25200	83025.6	70560	44478	37800
2-2'	744	580	36	26784	20880	74995.2	58464	40176	31320
<b>Total</b>				56436	46080	158020.8	129024	84654	69120

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## CHAPTER-4

## 4.0 MINING:

(A) Briefly describe the existing/proposed method for developing/working the deposit with all design parameters:

## I. Existing Method of mining:

It will be an opencast manual mine with adoption of drilling & blasting. Drilling is to be carried out with 32 mm diameter jack hammer drill rids & blasting material is to be used as an explosive. The blasted material broken by manually up to sized 2 ft. & loaded into tippers manually dispatch to crusher plant. Mining is being carried thought the formation of one bench. The height of bench is to be kept 3 m width of benches was kept 3.0 m with face slope 45°.

## II) Proposed method of mining:

It shall be an opencast semi-mechanized mine. excavator shall be deployed for removal of big boulders of blasted material from quarry & loading of the excavated mineral in to tractor trolleys. Drilling shall be carried out with 32 mm diameter jack hammers & blasting shall be carried out with slurry explosives. The height & width of bench shall be kept 6 m & 6 m with face slopes 45°. The blasted material shall be loaded by excavator to the tippers. Big boulders will be broken to the required size manually and will be loaded by excavator and will be transported to crusher plant.

## YEAR WISE GRANITE, KHANDA, GITTY, BOULDER PRODUCTION (As per LOI)

Proposed mining plan period – 05 years

Year	Overburden (cum)	ROM Granite, Khanda, Gitty, Boulder, (cum)	Saleable Granite, Khanda, Gitty, Boulder, (cum)	Sub grade Granite, Khanda, Gitty, Boulder, (cum)	Granite, Khanda, Gitty, Boulder (cum)	Granite, Khanda, Gitty, Boulder, (cum) to overburden ratio
First	Nil	12,100	12,100	Nil	Nil	Nil
Second	Nil	12,100	12,100	Nil	Nil	Nil
Third	Nil	12,100	12,100	Nil	Nil	Nil
Fourth	Nil	12,100	12,100	Nil	Nil	Nil
Fifth	Nil	12,100	12,100	Nil	Nil	Nil
Total	-	60,500	60,500	-	-	-

  
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The year wise development and extraction of mineral for first 05 years is detailed as under-

**1) Production & development in First year.**

Before start mining 7.50 m barrier along the lease boundary shall be marked as non mining zone. Mining shall be started by slicing from 146 mRL bench from dip towards rise side by removing the minerals in 6 m slice and completed 140 mRL. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below.

Bench Level (mRL)	Quantities in benches(cum)	Exploitation of Granite, Khanda, Gitty, Boulder in (cum)	Balance quantities in benches (cum)
146	32400	12,100	20,300
<b>Total</b>	<b>32400</b>	<b>12,100</b>	<b>20,300</b>

**2) Production & development in Second year.**

Mining shall be carried out in the bench 146 mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

Bench Level (mRL)	Quantities in benches(cum)	Exploitation of Granite, Khanda, Gitty, Boulder in (cum)	Balance quantities in benches(cum)
146	20,300	12,100	8,200
<b>Total</b>	<b>20,300</b>	<b>12,100</b>	<b>8,200</b>

**3) Production & development in Third year.**

Mining shall be carried out in the bench 146mRL and 140 mRL- 134 mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

Bench Level (mRL)	Quantities in benches(cum)	Exploitation of Granite, Khanda, Gitty, Boulder in (cum)	Balance quantities in benches(cum)
146	8,200	8,200	0
140-134	58638	3,900	54,738
<b>Total</b>	<b>64,068</b>	<b>12,100</b>	<b>54,738</b>



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**4) Production & development in fourth year.**

Mining shall be carried out in the bench 140 mRL- 134 mRL. Haul roads of 6 m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

Bench Level (mRL)	Quantities in benches(cum)	Exploitation of Granite, Khanda, Gitty, Boulder in (cum)	Balance quantities in benches(cum)
140-134	54,738	12,100	42,638
<b>Total</b>	<b>54,738</b>	<b>12,100</b>	<b>42,638</b>

**5) Production & development in fifth year.**

Mining shall be carried out in the bench 140 mRL- 134 mRL. Haul roads of 6m wide and 1:16 gradient shall be provided to each mining faces. Mining faces shall be advance in all directions against production target of 12,100 m<sup>3</sup>. Tentative percentage of R.O.M from each slice is tabulated as below:

Bench Level (mRL)	Quantities in benches(cum)	Exploitation of Granite, Khanda, Gitty, Boulder in (cum)	Balance quantities in benches(cum)
140-134	42,638	12,100	30,538
<b>Total</b>	<b>42,638</b>	<b>12,100</b>	<b>30,538</b>

The balance quantity of the bench will be extracted in the subsequent years of the project whose MP will be submitted for approval in due course of time.

**A) Attach supporting composite plan & section showing pit layouts, dumps, stacks of sub grade mineral, if any etc.**

The entire lease hold is stony having no soil over, and all quantities of soil to be generated shall be used for the purpose of plantation. Therefore no proposal of separate stacking of top soil has been envisaged. All quantities of stone to be exploited shall be used for making aggregates.

**B) Indicate rate of production when the mine fully developed & expected life of mine & the fifth year from which effected.**

The total mineable reserves of Granite, Khanda, Gitty, Boulder of area is (1.21 ha) with proposed rate of production 12,100 m<sup>3</sup>.

**C) Attach a note furnishing a conceptual mining plan up to life of mine based on geological mining & environmental considerations.**

**CONCEPTUAL PLAN:**

**Time Frame of Completion of Exploration:**

  
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**(i) Exploration as on date:**

The sanctioned Mining Lease Area is a virgin land and the mining for the granted is to be started after the grant of environment clearance. The measurement of the Sanctioned Mining Lease Area is illustrated as under-

Sanctioned Mining Lease Area	Average Length (m)	Average Width (m)	Lithology
1.21 ha	157	77	Granite, Khanda, Gitty, Boulder

**(ii) Exploration during plan period:**

The lease area is small & Virgin. There is no occurrence of out crops of Building stone, Khanda, Gitti, Boulder. Apart from this there are no. of stone quarries existing adjoining of lease area & depth of quarries has reached 34 m & Building stone, Khanda, Gitti, Boulder exists at the bottom of quarry. Considering of all these facts no future exploration programme has been envisaged during plan period.

**(iii) Conceptual Period:**

The lease area is small & during plan period of sanctioned mining period of maximum 10 years a volume of minor mineral 12,100 cum/year shall be explored. Remaining reserve will be exploration in next mining plan and lease period.

**Conceptual Development:**

The sanctioned MLA is a virgin land and the mining for the granted is to be started after the grant of environment clearance.

**Anticipated life of mine**

The sanctioned mining lease area is leased out for maximum 10 years detailed with the total mineable reserves of Building stone, Khanda, Gitti, Boulder of area are 1.21 ha with proposed rate of production of 12,100 m<sup>3</sup> / year.

**Waste Management:**

No top soil exists within the area therefore no proposal has been given for its managements.

**Reclamation/Rehabilitation:**

The mined out area & reclamation / rehabilitation as on date, at the end of plan period & at the end of conceptual period is as below.



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	Area broken (ha)	Area backfilling rehabilitation (ha)	Quantities of waste to be used in backfilling (cum)
As on date	Nil	Nil	Nil
End of plan period	Nil	Nil	Nil
End of conceptual period	Nil	Nil	Nil

(iv) **Post Mining Land use:**

The land use at present, at the end of plan period & at the end of conceptual period is given below:

Sl. No	Head	At present (ha)	At the end of Plan period (ha)	At the end of conceptual period of mine (ha.)
a)	Total area excavated (broken)	Nil	Nil	Nil
b)	Total Area fully mined out	Nil	Nil	Nil
c)	Total Area fully replenished	Nil	Nil	Nil

**I Dump area:**

There is no top soil was found in the mine. Therefore no proposal of Dump management shall be proposed.

Sl. No	Head	At present (ha)	At the end of Plan period (ha)	At the end of conceptual period of mine (ha.)
a)	Total area under dump	Nil	Nil	Nil
b)	Area under active dump	Nil	Nil	Nil
c)	Dump area fully rehabilitated	Nil	Nil	Nil

By the end of conceptual period, mining pit shall reach to ultimate pit limit & depth

**II Others:**

Sl. No	Head	At present (ha)	At the end of Plan period (ha)	At the end of conceptual period of mine (ha.)
a)	Area under mineral stack	Nil	Nil	Nil
b)	Area under haul road	Nil	0.06	0.06
c)	Area under green belt (ie. plantation along haulage route lease area)	Nil	0.06	0.06

Conceptual Plan & section is shown in **Plate No.06**

**Open Cast Mines:**

- i) Describe briefly giving salient features of the mode of working (mechanized, semi mechanized, manual):

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It will be an opencast semi-mechanized mine. The loading of mineral shall be carried out by means of an excavator. Mining shall be carried out from top to down ward through the formation of benches. The height of benches shall be kept 6 m, width 6 m with face slope 45°. Approach road having width 6 m & gradient 1:16 shall be provided to join the mining faces.

**ii) Describe briefly the layout of mine working, layout mine faces & sites for disposal of overburden/waste.**

Mining faces shall be opened from top to down word. It will be advance from north to south direction & orientation of faces shall be east-west direction. Approach road shall be produced to each mining faces for transportation of mineral. Top soil shall be generated during first year period and shall be used for purpose of plantation therefore there shall be no top soil stack.

**iii) Extent of mechanization:**

The requirement of mining equipment for next 05 years is calculated as below:

The annual production planned as per LOI= 12,100 cum/year

Production required considering 260 working days=  $12,100/260(\text{WD/Yr}) = 46.53 \text{ cum/day}$

**Following equipment will be used in the mining activities**

Sl. No.	Machinery Name	No. of Required
1	Jack Hammer	1
2	Compressor	1
3	Excavator	1
4	Dumper	2



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## CHAPTER-5

**5.0 BLASTING:**

- a) As mentioned earlier the mine will be worked manually in the initial stages and blasting will be limited to jack hammer holes (32 mm diameter) initially 3 m height sub benches shall be developed which shall be converted in 6 m height bench. Jack hammer holes will be drilled as below:

Hole depth : 3 m.

Spacing : 1.5 m.

Burden : Nil.

Thus one hole will give a quantity of about :  $3 \times 1.5 = 4.5$   
Say= 5 cum

Excavation required per day (Considering 260

Working Days/Years) :  $12,100 \text{ cum}/260 \text{ days} = 46.53 \text{ cum}$

Thus no. of holes required per day :  $46.53/5 = 9.306 \text{ Holes}$

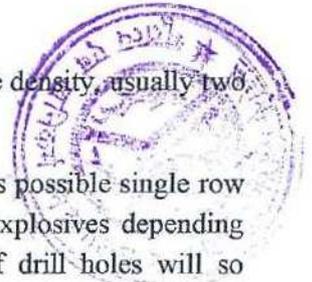
Say= 10 Holes

**Thus, the required number of Jack Hammer-01(Capacity 10 holes/day)**

**The required number of Compressor – 01 (type Atlas Copco)**

**Methodology of Blasting –**

- a) Blasting will be carried out under the supervision of qualified & experienced blasters following all the rules and guidelines for extraction of required minerals.
- b) The blasting will be undertaken by suitable explosives having comparable density, usually two cartridge of 250 gm will be sufficient in one hole of 3 m depth.
- c) The number of holes will be distributed in two working benches. As far as possible single row blasting may be preferred & each hole shall be charged with 250 gm explosives depending upon the free face available. The direction of face advance & row of drill holes will so proposed that the direction of fly rock material will be expected to fall over the benches.
- d) Powder ratio @ 1:20 i.e., 250 gms of explosive per hole will be required to reach 05 cum per Kg. of powder factor on the basis past experience in the surrounding area & lithology of rock,
- e) As per powder ratio of 1:20 for the exploitation of daily production 46.53 cum, the required explosive is  $46.53/20 = 2.3265$  say 10 kg. (10 explosive rod of 250 gm. each)



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**Tippers-**

Details of the number of tipper required for the transportation according to the daily excavation volume is tabulated as under-

Daily production(cum)	Capacity of tipper	Number of ferry / trip day	Volume ferried by 1 tipper	Number of tipper required
46.53	4 cum	10	40 cum	2

**Mining Methodology:**

- 1) The mining activities will be carried out as per guidelines, manuals, laws and acts for the open cast stone mining.
- 2) The extraction of the mineral will be carried out starting from 146 mRL downwards for the 5 years of the Mining Lease Period.
- 3) No mining activities carried out in the safe barrier of 7.5 m.
- 4) The height and width of each bench will be 5 m and 6 m.
- 5) Mining activities will be carried out in dry season and day time.
- 6) Drilling and blasting will be carried out as per guidelines and under the supervision of qualified technical person.
- 7) All the precautions for drilling and blasting will be taken care of as per guidelines.

**PRECAUTIONS FOR DRILLING AND BLASTING:**

**The foremost precaution for blasting is that it should be carried out under the strict supervision of qualified and experience blaster.**

1. Drilling- DTH (Down To Hole), V-shaped in two rows with proper spacing in day time.
2. Stemming should be strong and of adequate length and not less than 1/3<sup>rd</sup> length of the hole. This will check blow outs.
3. Blasting should be avoided in early morning and late evening hours to avoid temperature inversion conditions.
4. Blasting may be avoided at the time when strong surface winds are blowing towards inhabited area.
5. The burden at any point in the charge length should not be less than optimal.
6. The wind direction at the time of blasting should not be towards the structure to be protected, especially if wind speed is high.
7. Blasting may be done at a time when there is heavy background noise. In some mines abroad, they are creating it artificially. Many blasting nuisances become less apparent.



8. Blasting should be done, if feasible, once blasting of larger rounds, infrequently can be better supervised, causing reduction in nuisances, Further the villagers provided less frequently, will itself lead to a reduction in the number of complaints.
9. Pre shooting of the boulders, instead of plaster shooting, should be continued.
10. Before electric firing, the circuit will be tested by an approved tester.
11. Flags erection and siren signaling systems will also provided during time of blasting. For further safety, the blasting time will also fixed during the end of the shift so that all the workers will removed outside the danger zone.
12. To prevent risk of injury to anybody by flying pieces of Getty after blast, muffle blasting will be adopted. In this practice the mouth of the shot hole and some distance around it will be covered by steel sheets, weighted by sand bags, old sleepers etc. This will prevent the broken rock from flying out.
13. **All the precautions suggested in MMR 1961 specially as specified from Regulation 162 to Regulation 168 must be adhered.**



  
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## CHAPTER- 6

**6.0 MINE DRAINAGE:****a) Likely depth of water table based on observations from nearby wells and water bodies:**

One dug well is situated about 2.5 km aerial distance towards lease area in crusher side. The top level of the well is 105 mRL & water table encountered in the well is about 50 m. deep and the expected depth of water table in the region is about 60 mRL. During summers the water table further goes down about 3.0 m and depth of water table will be about 57 mRL. In winters, the water table goes down about 2.0 m and expected depth of water level is about 68 m RL. During rainy season the water level further rises about 2.0 m. and depth of water level is about 62 mRL.

Working expected to be 60 m above the water table during first to second years, the mine working will be confined up to 134 mRL. Water table will not be intersected by mining operations.

**b) Quantity and quality of water likely to be encountered, the pumping arrangement and places where the mine water is finally proposed to be discharged.**

The mining operations will be limited in the upper levels & the lowest bench will be formed at 128 mRL, hence water table will be not be encountered by mining activities during first to fifth years.



  
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 CHAPTER-7 & 8
 

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**7.0 STACKING OF MINERAL REJECTS AND DISPOSAL OF WASTE:**

- a) **Indicate briefly the nature and quantity of top soil, overburden/waste and mineral rejects likely to be generated during the next First to Second years:**

As stated earlier that entire lease area consist of quartzite's s& further persists depth, all the quantities to be exploited shall be sent to crusher plant outside the area which will be used in making Gitti. There is no overburden with in lease area. Mining has been proposed for the exploitation of quartzites, boulders, therefore waste, sub grade mineral rejects shall not be generated during course of mining.

- b) **Land chosen for disposal of waste with proposed justification.**

No waste or top soil shall be generated during mining activities; therefore no proposal is given for separate stacking of top soil & waste material.

- c) **Attach a note indicating the manner of disposal, and configuration, sequence of buildup of dumps along with the proposals for the stacking of sub-grade ore, to be indicated item wise.**

The entire lease area is barren hilly terrain having no soil cover / vegetation. Top soil & waste shall not be generated due to mining operations therefore disposal and configuration of build of dumps shall not arise during first year's period.

**8.0 USE OF MINERAL:**

The Extracted mineral will be used for making the Granite, Khanda, Gitty, Boulder, as well as in making aggregates and metal missionary stone. The quartzites of lease area are hard, medium to coarse grained grey in color showing.



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## CHAPTER-9

**9.0 OTHER:****9a) Site Services**

The following site services will be provided:

- i) Office
- ii) Drinking water shed
- iii) Rest shelter
- iv) First Aid Centre
- v) Store

**9b) Employment Potential**

The mine manager cum mining engineer should a graduate mining engineer holding at least second class manager's certificate. The mate-cum-blaster should hold mining mate certificate of competency.

Thus category-wise employments will be as below:

Mines manager/mining engineer (Full time)	:	1
Mines mate / Blaster	:	1
<b>Skilled:</b>		
Drivers	:	2
Supervisor	:	1
Time Keeper	:	1
Office Assistant/Dispatch Supervisor	:	1
Blasters	:	1
<b>Semiskilled:</b>		
Compressor operator	:	1
Jack hammer operator	:	1
<b>Un-skilled:</b>		
Piece rated workers	:	20
<b>Total</b>		<b>30</b>



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## CHAPTER-10

**10.0 MINERAL PROCESSING:**

- a) **If processing / beneficiation of the ore or minerals mined is planned to be conducted on site or adjacent to the extraction area, briefly describe the nature of the processing / beneficiation. This should indicate size and grade of feed material and concentrate (finished marketable product),**

The entire lease area consists of Building stone terrain therefore, no beneficiation of mineral processing will require for quartzites.

- b) **Explain the disposal method for tailing or waste from the processing plant (quantity and quality of tailings proposed to be discharged, size and capacity of tailing pond, toxic effect of such tailing, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailing dam)**

As stated above that no beneficiation is required therefore no tailing or waste disposal from processing plant will be undertaken.

- c) **A flow sheet or schematic diagram of the processing procedure should be attached.**

No beneficiation studies will be carried out therefore no flow sheet of processing process is attached.

- d) **Specify quantity and type of chemicals to be used in the processing plant.**

No chemicals will be required.

- e) **Specify quantity and type of chemicals to be stored on site / plant.**

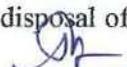
No chemical will be stored on the site / plant.

- f) **Indicate quantity (cum. per day) of water required for mining and processing and sources of supply or water. Disposal of water and extent of recycling.**

Total water requirement for the project is 7.7 KLD; its breakup is as under:

Sl. No.	Purpose	Water Requirement (KLD)
1.	Dust Suppression	7.2
2.	Plantation	0.2
3.	Domestic(Drinking)	0.30
<b>Total</b>		<b>7.7</b>

However, No water is required for mining and processing hence, no disposal of water and extent for recycling is required.

  
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## CHAPTER-11

**11. ENVIRONMENTAL MANAGEMENT PLAN:****(a) Attach a note on the status of base line information with regard to the following:****(i) Land Use:**

The existing land use of the area is non-agricultural, non forest, barren, rocky upland.

The planned land use is given in tabular form:

Sr. No.	Land use	Agriculture land (ha)	Forest Land (ha)	Waste land (ha)	Grazing Land (ha)
1	Mining pits Quarry	-	-	1.1353	-
2	Approach Road	-	-	0.06	-
3	Dumps	-	-	-	-
4	Office, Resht Shelter etc.	-	-	0.01	-
5	Balance undisturbed land	-	-	0.0047	-
	<b>Total</b>	-	-	<b>1.21</b>	-

**(ii) Water Regime:**

There is no perennial water body in the area. Water table loses its significance in this region due to great depth. The depth of water table is about 50 m. below: general ground level. The shear zone which allows the flow of water in the sub surface is restricted, through when tapped in wells, hand pumps & tube wells provide sufficient water round the year.

**(iii) Flora and Fauna:**

Shrubs of Karaunda are found in with in the area. Vegetation and wild life are quite scanty. Trees of Neem, Mahua, Jamun, Mango & Pipal etc. are found only in and around the villages or in agriculture fields. Cows, horses, donkeys, goats, sheep and buffalos are kept for house hold requirements. Wild life comprises of rabbits, Squirrels, foxes, snakes, and lizard. Fishes, turtle, and crabs form aquatic life which occurs within a radius of 5 km. Low shrubs and bushes grow on barren rocky areas of the applied area. No wild life is found within the applied area.

**(iv) Quality of ambient air noise level and water:**

The proposed site is located in the remote area having a clean atmosphere. Therefore the quality of ambient air will be as good as heaven. SPM, SO<sub>2</sub>, NOX. will be either below permissible limits or close to threshold limits. Similarly ambient noise level is as low as of any standard place.

The permissible limit of SPM, SO<sub>2</sub>, & NOX and air quality was observed within the lease hold is given below:

Parameter	Promulgated limit	Present within the lease hold
SPM	500 µg/m <sup>3</sup>	220 µg/m <sup>3</sup>
SO <sub>2</sub>	120 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
NOX	120 µg/m <sup>3</sup>	18 µg/m <sup>3</sup>

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The water quality will not be affected as mining is restricted to above ground level. Drinking water is being taken from the hand pumps, which is situated near the mining area. Number of hand pumps is dug in the villages.

(v) **Climatic Conditions:**

a) **Temperature:**

The average annual rainfall is 902.00 mm. The climate is typical subtropical penetrated by long and intense summers. About 80% of the annual rainfall is received from south-west monsoon.

b) **Rainfall:**

May is the hottest month with mercury shooting upto 47.0 C. With the advance of monsoon by mid June, temperature starts decreasing. January is usually the coldest month with temperature going upto 5.8 C.

c) **Humidity:**

The relative humidity is highest in August about 85% and lowest in April

d) **Wind Velocity:**

The wind velocity is higher during pre-monsoon period as compared to post monsoon observed during the month of June and minimum 1-8 km/hr.

vi) **Human Settlement:**

Human settlements are distributed in fringes of buffer zone. The inhabitants belong to all the five castes. The local inhabitants are bundles, who speak in bundeli and are farmers. The main occupation in 5 km. buffer zone is farming and mining. The agriculture alone does not appear to be sufficient to sustain the population. Poor literacy conditions prevail in the surrounding of lease area & condition of literacy is more pathetic in females. Older generation wear Dhoti Kurta while younger generation is adopting dresses like pant, shirts etc. The villagers collect the "MAHUA" and sell it to the market while part of the quantity is used for making country liquor.

**Occupation:**

Agricultural remains the main occupation in this area. Study reveals that within 5 Km. radius of-lease each, 70% to 85% population is engaged in agriculture. Percentage of females engaged in agriculture is higher than males.

Disparity in agricultural land holding is less. But yield of agricultural produce is very poor to sustain the available hands. Consequently problem of unemployment and frustration amongst youth can be noticed in the area. The yield of crops is as below:

Rice	:	200 Kg per Acre
Wheat	:	700 Kg per Acre

  
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Gram	:	500 Kg per Acre
Arhar	:	400 Kg per Acre
Soya bean	:	300 Kg per Acre

**(vii) Public building, places of worship and monuments:**

None of the above important features are within the lease hold or in close proximity of lease hold.

**(viii) Does area (partly or fully) falls under notified area under water (Prevention & control of Pollution) Act 1974:**

The lease hold has not been notified under water (Prevention & control of pollution) Act 1974.

**(b) Attach an Environmental impact Assessment statement describing the impact of mining and beneficiation on the following over the next Five years.**

**(i) Land use:**

The sanctioned MLA is a virgin land and the mining for the extraction of granted quantity of minor mineral will be started after the grant of environment clearance.

At present, there is no any type of pit is present in the mining lease area.

However, at the end of the first year period of mining lease granted period the impact on land use will be limited.

Hence, there is no change in the land use of the area in the first 5 years mining plan period of the mining lease of the project.

**(ii) Air Quality:**

It has already been explained that mining will be in a very small scale with limited drilling and blasting. One of the most possible elements for air pollution is vehicular transport. The following mitigatory measures will be applied for minimizing the air pollution –

- Limited movement of tippers/tractor trolleys under the project.
- Development of green belt along the haulage route.
- Water sprinkling on haulage-routes in dry months.
- No overloading and transportation under covering.



**(iii) Water Quality**

There is no proposal for RR under the project. However, the following measures to minimize the possible water pollutants are to be applied-

- The proposed mining lease area is rugged, barren, non-forest, non-vegetated, stony upland where the water table does not have any relevance in this terrain.
- The water table in this area is found about 50 m below the ground level.
- The working during next five years is confined to the extraction of mineral.

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**(iv) Noise Level:**

To minimize the possible noise pollution following measures will be applied-

- The machineries to be used will be properly maintained with proper oiling and greasing.
- No pressure horn and transportation not through the village.
- Mining only day time.
- Besides, it has been explained earlier that proposed mining is of open cast semi-mechanized. Drilling, blasting, excavator and other equipment even vehicular transport will be applied for limited time. Therefore noise level too will not show any significant increase.

**(v) Vibration level:**

In order to check the possible vibration under the project, the machineries to be used in the mining activities will be properly maintained.

Drilling will be with sharp drill rod in DTH fashion.

The blasting will be closed circuit, V-shaped, non-electrical, delayed techniques and muffle type.

**(vi) Water Regime:**

The sanctioned mining lease area is small in area. There is no perennial drainage within the area therefore no significant impact will occur on the surface water.

More-over, in first 5 yrs the required mineral thus the change due to excavation will not cause any change in the water regime of the mine site.

**(vii) Socio-Economics:**

The socio economy effect of the project to the nearby villages and its population will be positive due to –

- Employment to the local workers.
- Economic activity of the area will be enhanced.
- The physical and economic conditions of the local peoples will be better.

**(viii) Historical Monuments etc.:**

No historical monuments exist in & around the proposed mining lease area.

- (c) Attach an Environmental Management Plant supported by appropriate plans and sections dealing the time bound action proposed to be taken with sequence and timing in the following areas (or diagram should be added) and shown in Plate No.07**

**Temporary storage and utilization top soil:**

  
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Mining shall be under taken in rocky terrain having no soil cover. Thus, generation of top soil shall be nil & does not required any proposal for stacking of soil.

**II. Year wise proposal for reclamation of land affected by abandoned quarries and allied mining activities during next fifth year's period:**

In the first five years the extraction of mineral will be carried out from lease area with total ROM saleable without generating any waste or causing any pit formation and any type of land degradation.

**- Program of afforestation year wise for the initial Five year indicating number of plants with name of species, afforested under different areas in ha.**

**Programme of Afforestation:**

- o Since the mining area is mainly rocky, hence plantation on the mining area & its periphery is very difficult.
- o For that, the plantation will be carried out along the haulage-route.
- o All possible care will be taken for the survival of the planted green cover.
- o Plantation will be carried out with plants of local early growing species.
- o Proper watering of the plants and tree guards will be taken care of.
- o The tree species recommended are Ficus religiosa (pipal), Boswellia serrata (Salai), Shorea robusta (sal) and tactione grandis (teak) may also be recommended. Mangifera indica (Aam), Emblica officinalis (Anwala), Aegle marmelos (Ibei), Planting should be done in large sized 90 cm x 90 cm. due in advance and filled about 50 days before planting.
- o The plantation raised earlier should be carefully maintained. Mortalities should be replaced by fresh planting.

**Post Plantation Care:**

Following precaution to be undertaken for survival of plants:

- i) The samplings will be undertaken for survival of plants.
- ii) Plants will be taken care by applying fertilizers and proper weeding etc.
- iii) Healthy tree species will be recommends for plantation.
- iv) Fatal saplings will be replaced with new healthy saplings.
- v) Every sampling will be covered by tree guard to avoid damage through cattle grazing.
- vi) A Gardner or majdoor should be employed for care.
- vii) Necessary arrangement will be provided for watering tree species planted at different parts.

**4. Stabilization and vegetation of dumps along with interburden dumps management year wise for initial three years:**

  
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The entire lease area is quartzite's having no waste, therefore generation of waste during next fifth years shall be nil & no proposal has been envisaged for its separate.

**5. Measures to Control erosion/sedimentation of water courses:**

No drainage of water course will be disturbed due to mining. The lease area consists of quartzites out crops & rain water will accumulate in the mining pits which shall be dumped out. As quartzites are hard rock therefore erosion/sedimentation along water courses will not arise.

**6. Treatment and disposal of water from mine:**

It has already been mentioned that water table does not have any relevance in this plateau due to its great depth therefore treatment and disposal will not be concern in the mine.

**7. Measures for minimizing adverse effects on water regime:**

It has already been stated that mining will not interfere with the surface and underground water however to take care of eventualities.

**8. Protective measures for ground vibration/air blast caused by blasting:**

As the proposed method of mining is manual open cast with limited amount of drilling and blasting. The impact on this aspect is negligible.

**9. Measure for protecting historical Monuments and for rehabilitation of human settlement likely to be disturbed due to mining activity:**

Neither any historical monuments exist within the lease area nor is any RR proposed under the project.

**10. Socioeconomic beneficiate out of mining:**

The proposed project will provide a source of direct and indirect employment to the people of nearby villages which will movelize the economic activities of the area and the economic condition of the local people will be affected positively.



  
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## PROGRESSIVE MINE CLOSURE PLAN

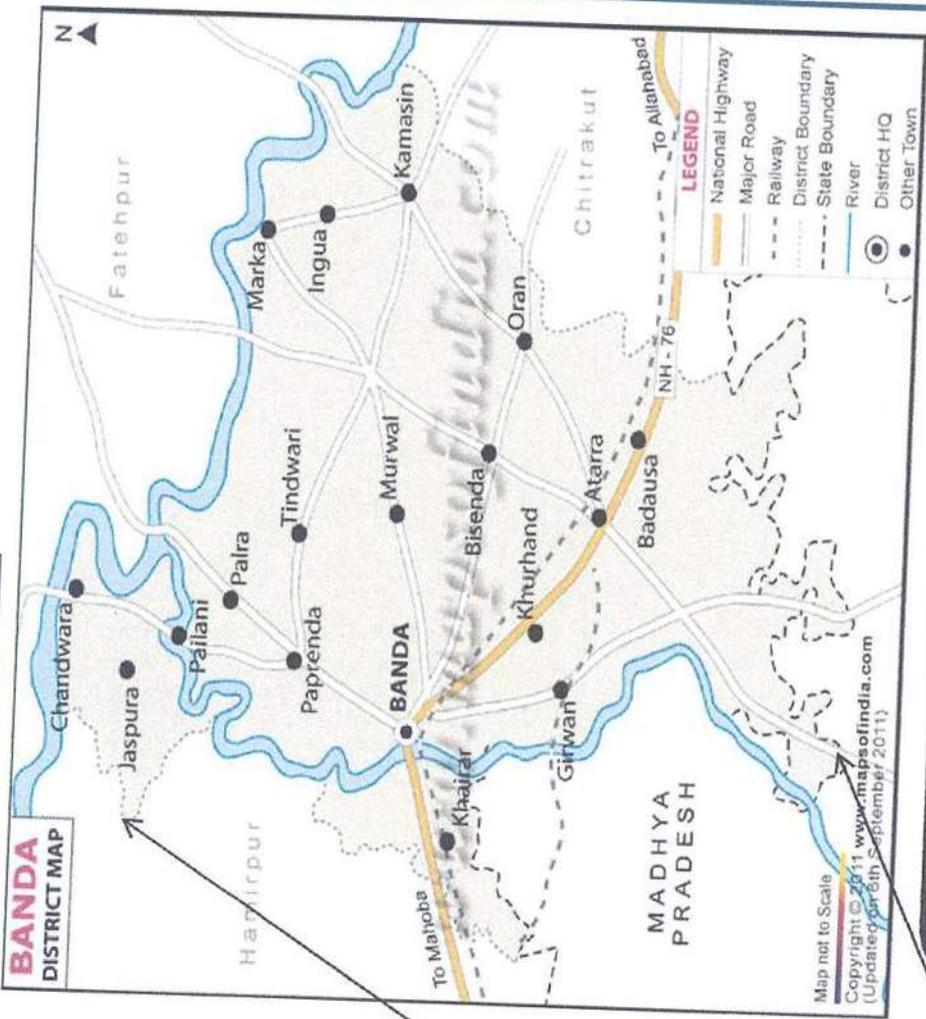
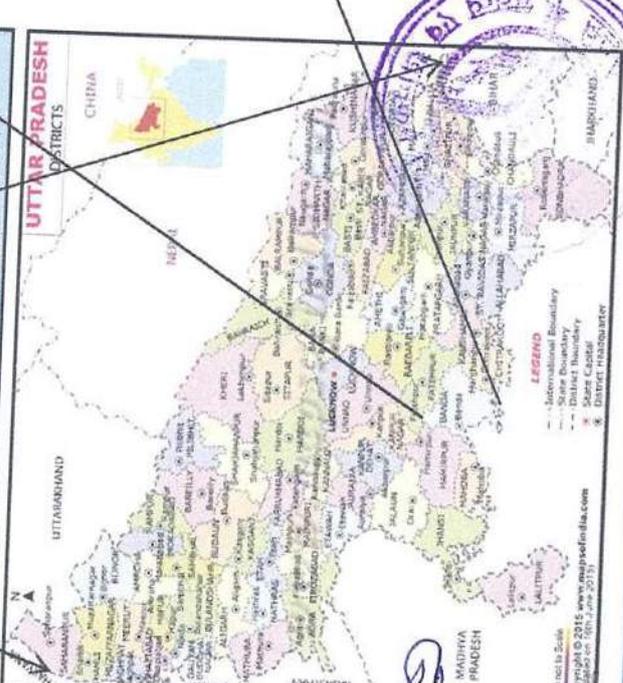
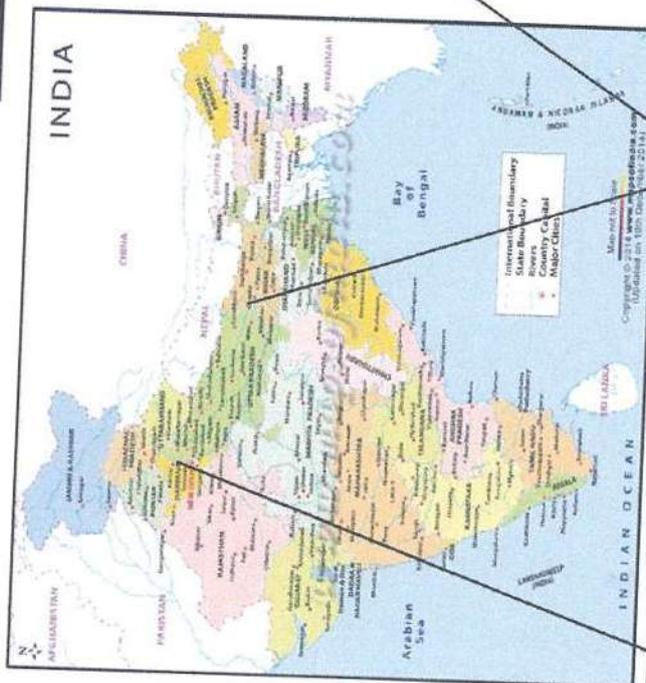
Since, the Sanctioned Mining Lease period of the proposed project of Granite, Khanda, Gitti, Boulder is for maximum 10 years and the Mining Plan of the project being submitted is prepared for the first 05 years tenure.

Hence, Mining plan for subsequent period / tenure will be submitted for approval in coming times accordingly. Therefore the required Progressive Mine Closure Plan will be prepared and will be submitted with the Mining Plan of the final tenure of the mining project.



  
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# LOCATION MAP



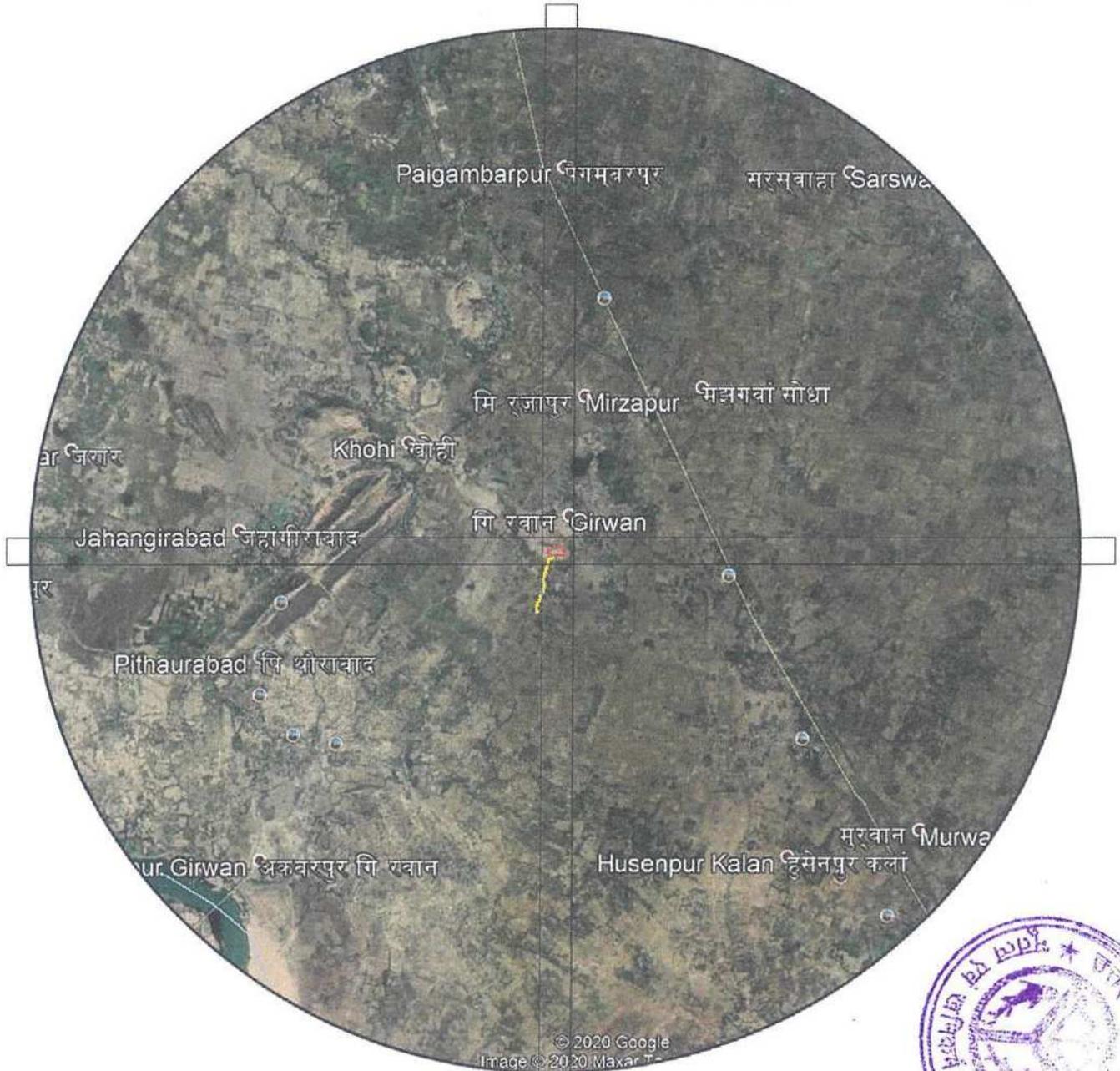
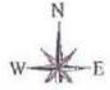
**LOCATION MAP** **PLATE NO-01**

M/S BAIRANG ROAD LINES PARTNER  
 SHRI SURESH PRATAP SINGH  
 S/O SHRI TEJ PRATAP SINGH R/O VILLAGE AND POST- MAU, 584, KATRA LALGANJ,  
 TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

GATA NO. 1876 (KHAND-04)  
 AREA - 1.21ha.

VILLAGE- GIRWAN, TEHSIL- NARAINI, DISTRICT- BANDA (U.P.)

## GOOGLE MAP

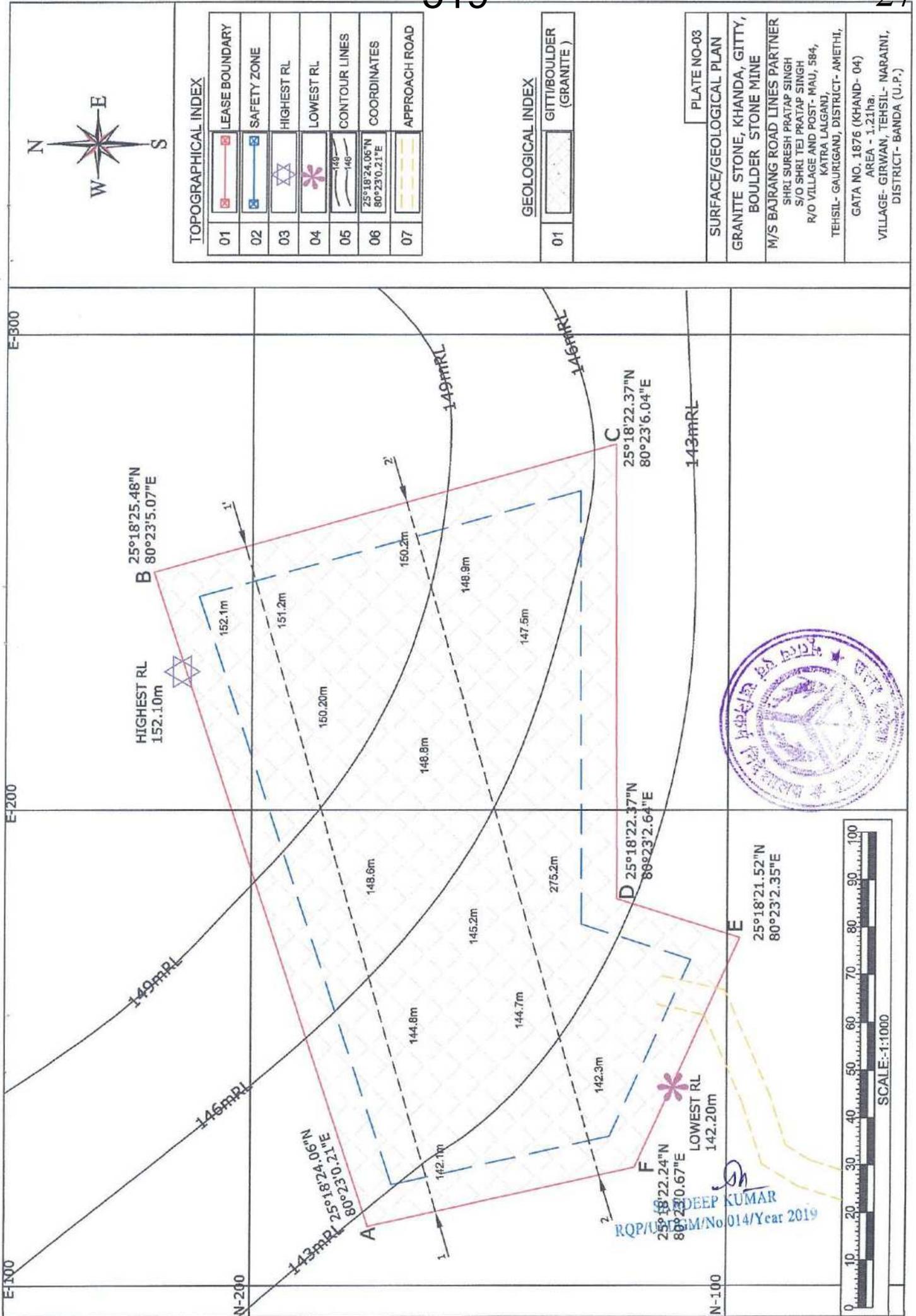


## GOOGLE MAP

M/S BAJRANG ROAD LINES PARTNER  
 SHRI SURESH PRATAP SINGH  
 S/O SHRI TEJ PRATAP SINGH  
 R/O VILLAGE AND POST- MAU, 584, KATRA LALGANJ,  
 TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

GATA NO. 1876 (KHAND- 04)  
 AREA - 1.21ha.  
 VILLAGE- GIRWAN, TEHSIL- NARAINI,  
 DISTRICT- BANDA (U.P.)

  
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**TOPOGRAPHICAL INDEX**

01		LEASE BOUNDARY
02		SAFETY ZONE
03		HIGHEST RL
04		LOWEST RL
05		CONTOUR LINES
06		COORDINATES 25°18'24.06"N 80°23'0.21"E
07		APPROACH ROAD

**GEOLOGICAL INDEX**

01		GITTI/BOULDER (GRANITE)
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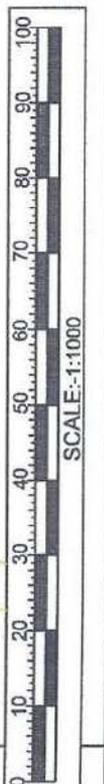
**PLATE NO-03**

**SURFACE/GEOLOGICAL PLAN**

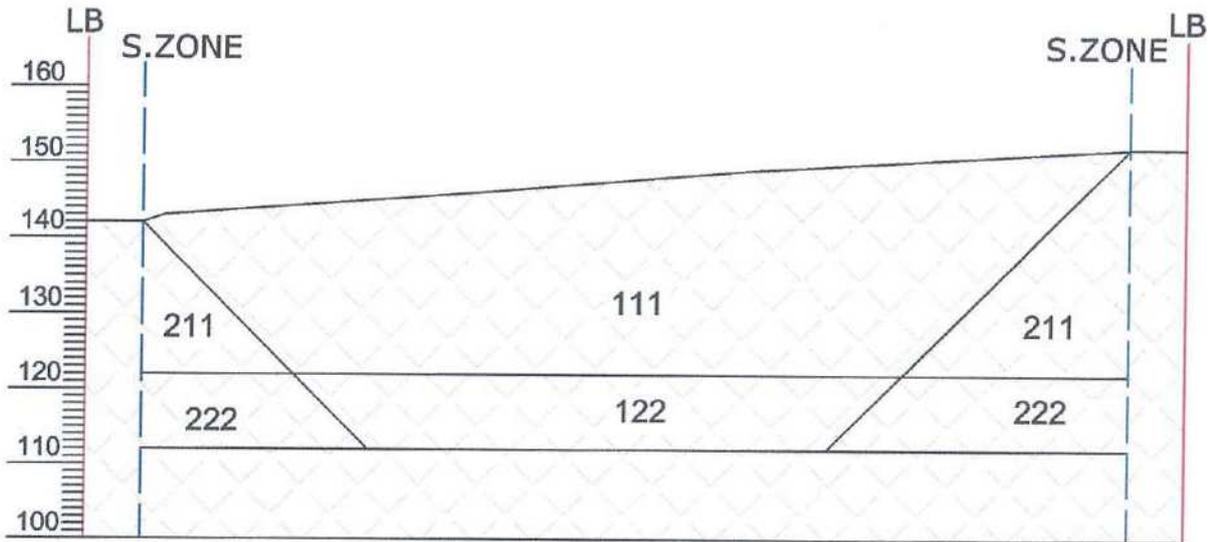
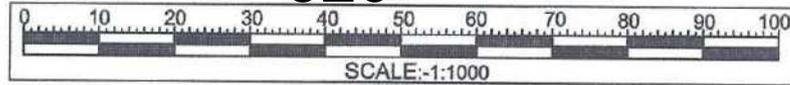
**GRANITE STONE, KHANDA, GITTY, BOULDER STONE MINE**

**M/S BAJRANG ROAD LINES PARTNER**  
 SHRI SURESH PRATAP SINGH  
 S/O SHRI TEJ PRATAP SINGH  
 R/O VILLAGE AND POST- MAU, 584,  
 KATRA LALGANJ,  
 TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

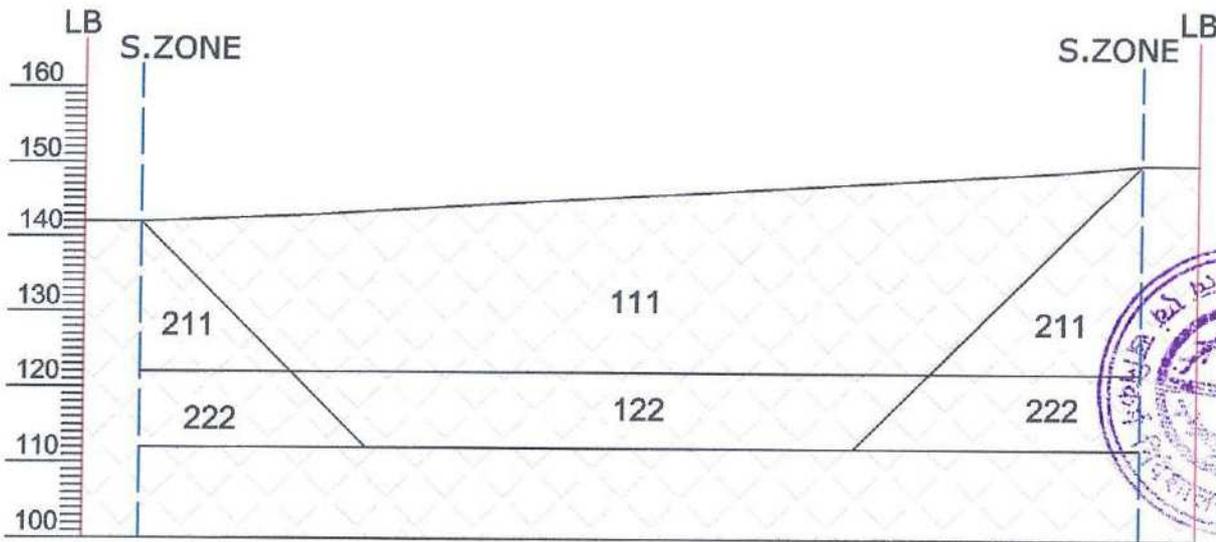
**GATA NO. 1676 (KHAND- 04)**  
 AREA - 1.21ha.  
 VILLAGE- GIRWAN, TEHSIL- NARAINI,  
 DISTRICT- BANDA (U.P.)



DR. DEEP KUMAR  
 RQP/US/M/No 014/Year 2019



GEOLOGICAL SECTION ALONG 1-1'



GEOLOGICAL SECTION ALONG 2-2'



**LEGEND**

1		LEASE BOUNDRAY
2		SAFETY ZONE
3	111	PROVED CATEGORY
4	122	PROBABLE CATEGORY
5	211/222	PRE-FEASIBILITY RESOURCES

**GEOLOGICAL INDEX**

01		GITTI/BOULDER (GRANITE)
----	--	-------------------------

PLATE NO-04

**GEOLOGICAL SECTION**

GRANITE STONE, KHANDA, GITTY, BOULDER STONE MINE

M/S BAJRANG ROAD LINES PARTNER

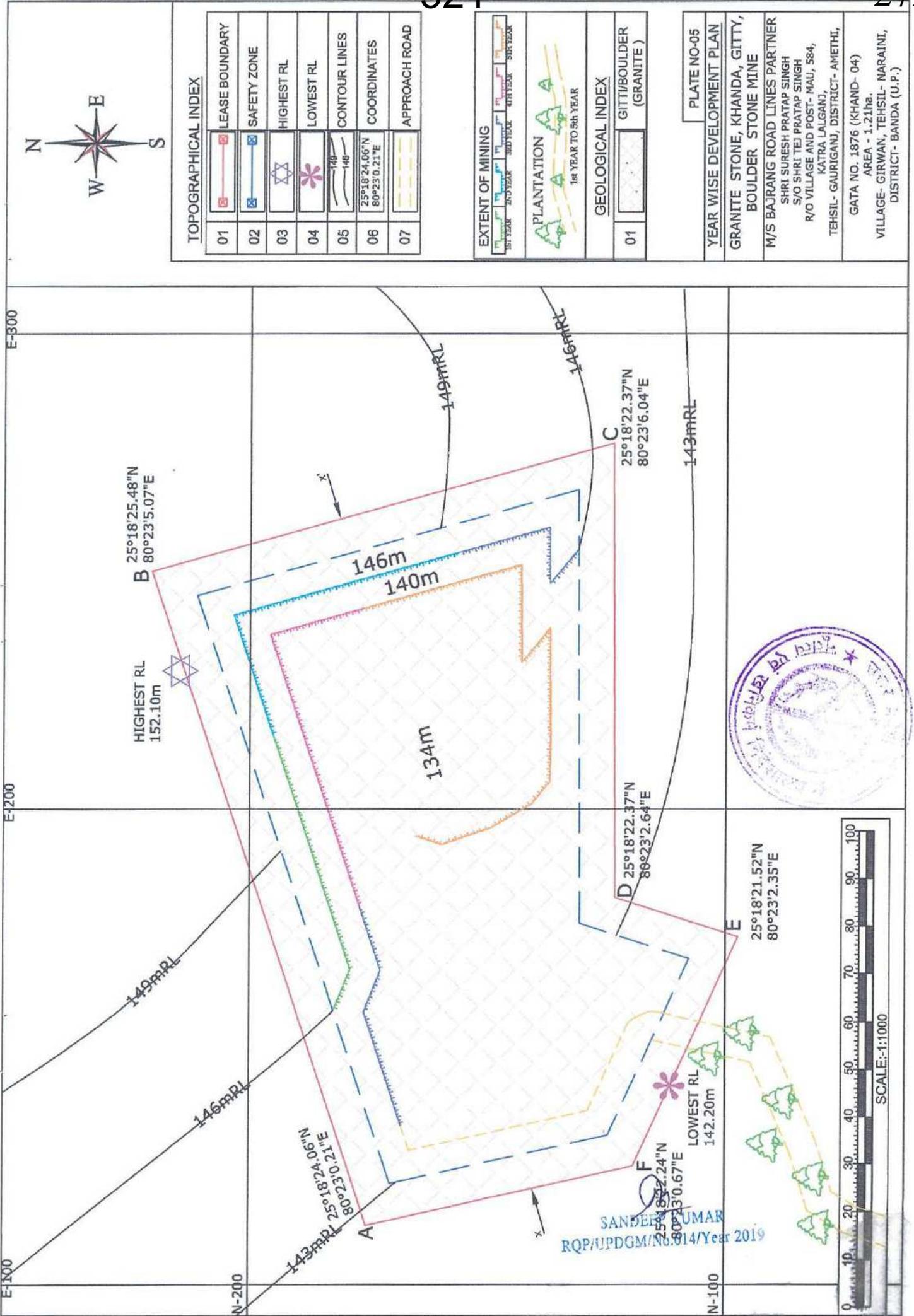
SHRI SURESH PRATAP SINGH  
S/O SHRI TEJ PRATAP SINGH  
R/O VILLAGE AND POST- MAU, 584,  
KATRA LALGANJ,  
TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

GATA NO. 1876 (KHAND- 04)

AREA - 1.21ha.

VILLAGE- GIRWAN, TEHSIL- NARAINI,  
DISTRICT- BANDA (U.P.)

*SANDEEP KUMAR*  
RQP/UPDGM/No.014/Year 2019



TOPOGRAPHICAL INDEX	
01	LEASE BOUNDARY
02	SAFETY ZONE
03	HIGHEST RL
04	LOWEST RL
05	CONTOUR LINES
06	COORDINATES
07	APPROACH ROAD

EXTENT OF MINING	
1st YEAR	2nd YEAR
3rd YEAR	4th YEAR
5th YEAR	6th YEAR

PLANTATION	
1st YEAR TO 5th YEAR	

GEOLOGICAL INDEX	
01	GITTBOLDBLDER (GRANITE)

PLATE NO-05

YEAR WISE DEVELOPMENT PLAN

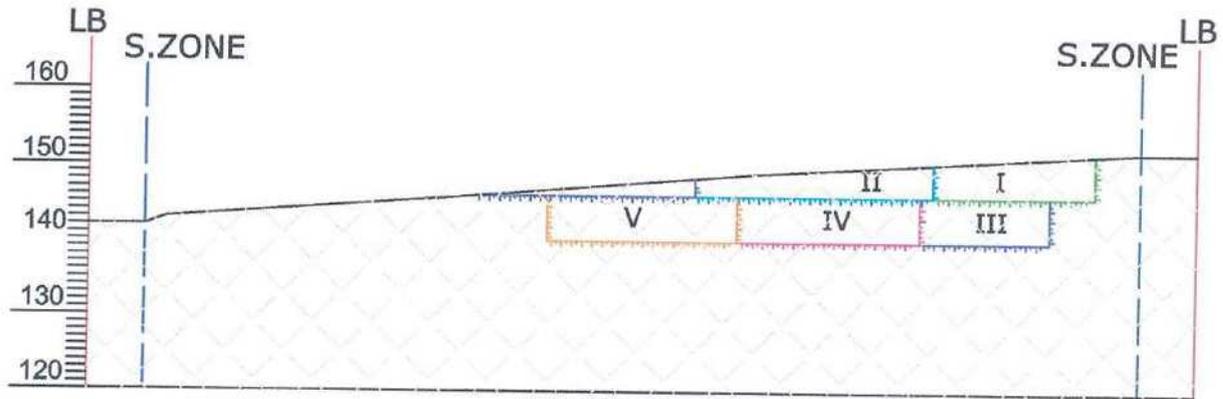
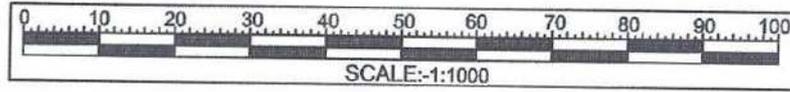
GRANITE STONE, KHANDA, GITTY, BOULDER STONE MINE

M/S BAJRANG ROAD LINES PARTNER  
 SHRI SURESH PRATAP SINGH  
 S/O SHRI TEJ PRATAP SINGH  
 R/O VILLAGE AND POST- MAU, 584,  
 KATRA LALGANJ,  
 TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

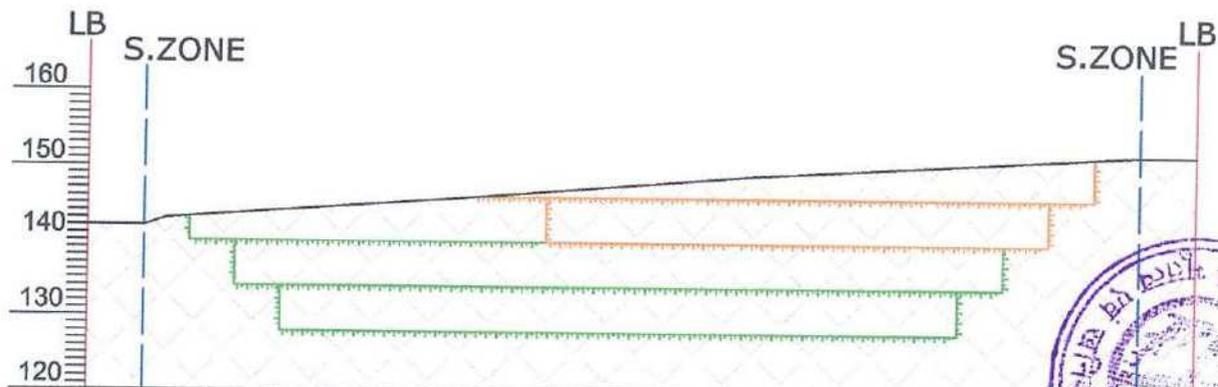
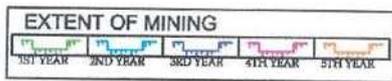
GATA NO. 1876 (KHAND- 04)  
 AREA - 1.21ha.  
 VILLAGE- GIRWAN, TEHSIL- NARAINI,  
 DISTRICT- BANDA (U.P.)



SANDEEP KUMAR  
 RQP/UPDGM/No.914/Year 2019



YEAR WISE PIT SECTION ALONG X-X'



CONCEPTUAL PIT SECTION ALONG X-X'



LEGEND

1		LEASE BOUNDARY
2		SAFETY ZONE

GEOLOGICAL INDEX

01		GITTI/BOULDER (GRANITE)
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PLATE NO-5(A)

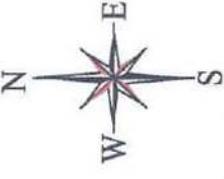
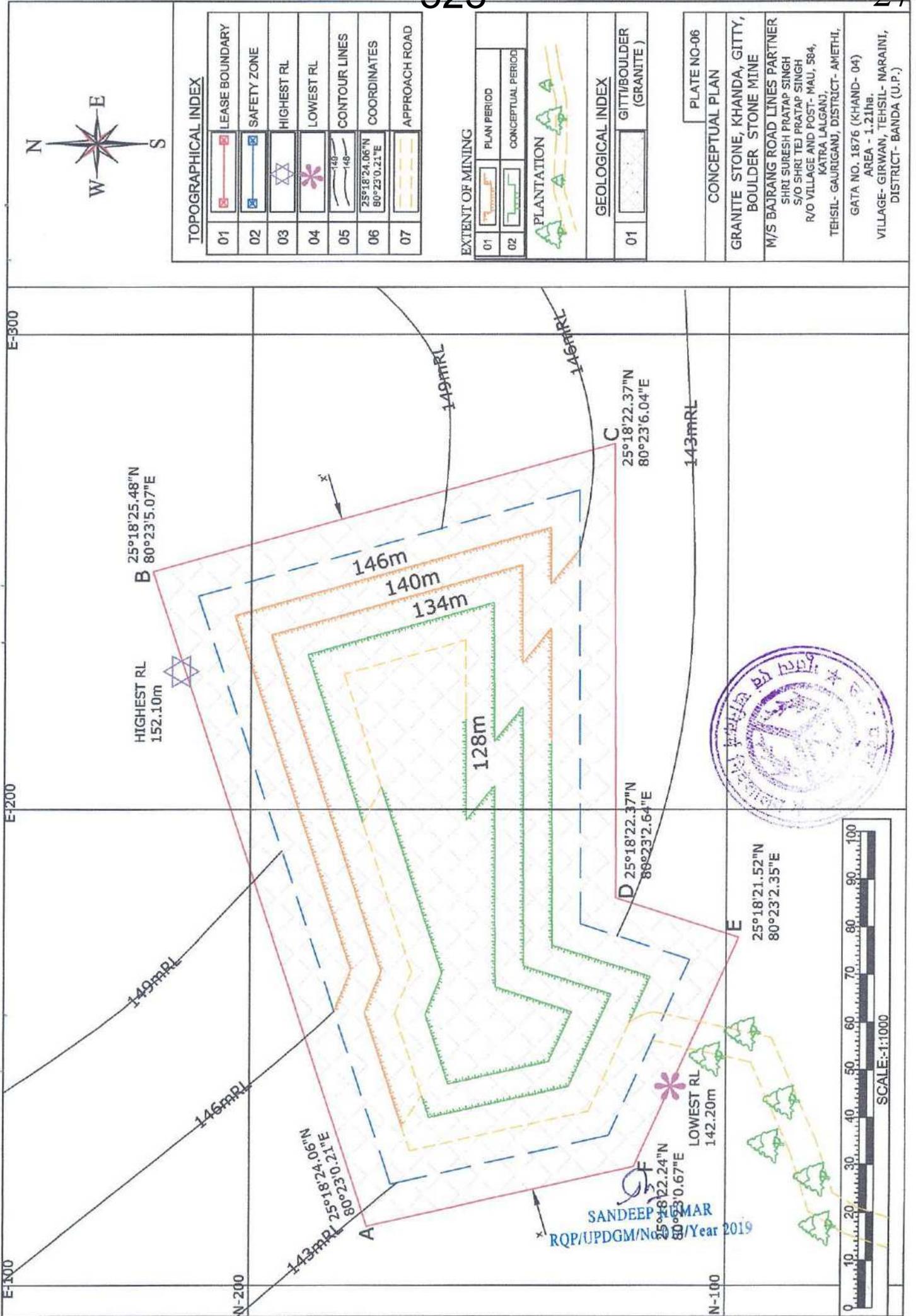
PIT SECTION

GRANITE STONE, KHANDA, GITTY,  
BOULDER STONE MINE

M/S BAJRANG ROAD LINES PARTNER  
SHRI SURESH PRATAP SINGH  
S/O SHRI TEJ PRATAP SINGH  
R/O VILLAGE AND POST- MAU, 584,  
KATRA LALGANJ,  
TEHSIL- GAURIGANJ, DISTRICT- AMETHI,

GATA NO. 1876 (KHAND- 04)  
AREA - 1.21ha.  
VILLAGE- GIRWAN, TEHSIL- NARAINI,  
DISTRICT- BANDA (U.P.)

*Sd/-*  
**SANDEEP KUMAR**  
RQP/UPDGM/No.014/Year 201



TOPOGRAPHICAL INDEX	
01	LEASE BOUNDARY
02	SAFETY ZONE
03	HIGHEST RL
04	LOWEST RL
05	CONTOUR LINES
06	COORDINATES
07	APPROACH ROAD

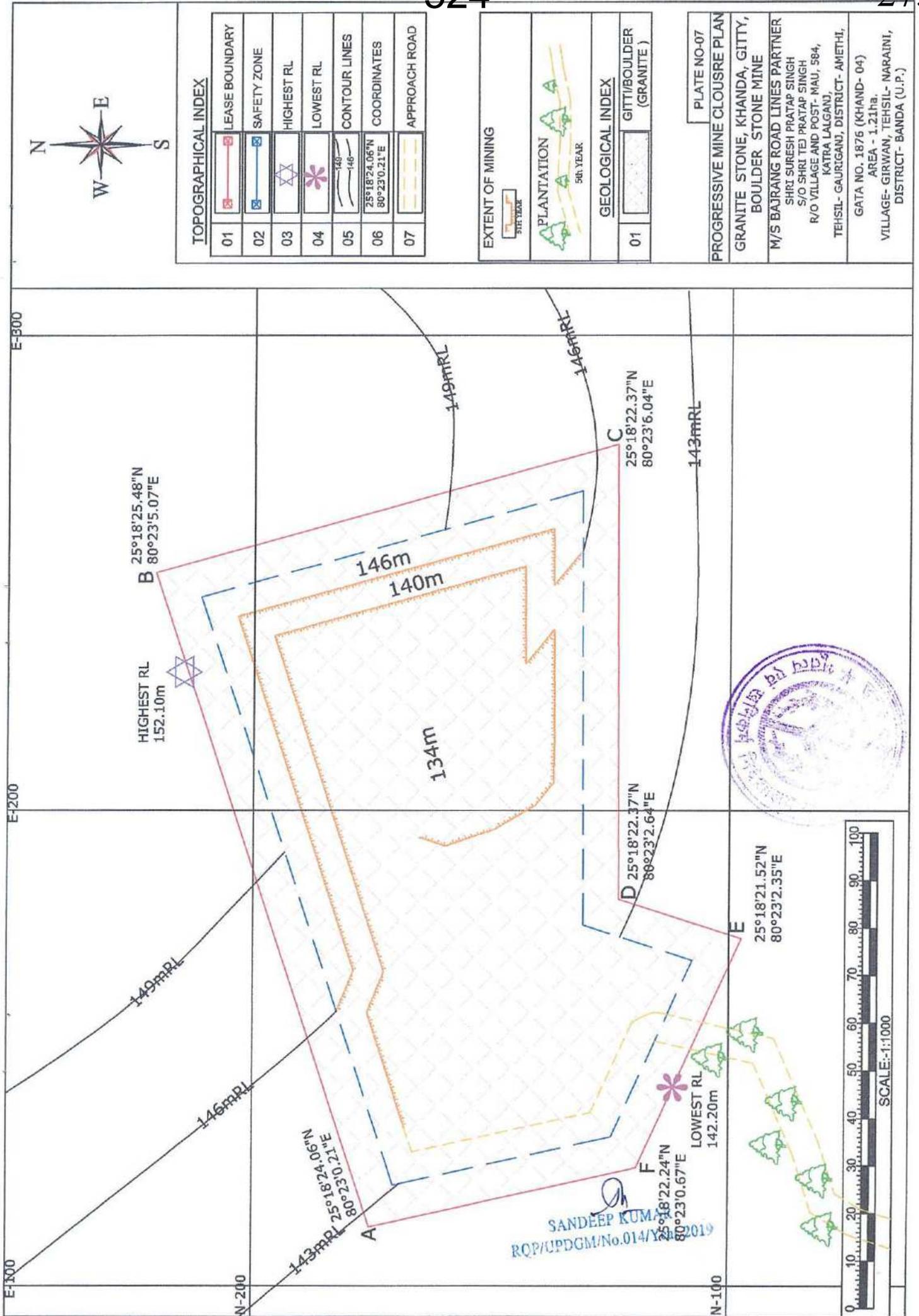
EXTENT OF MINING	
01	PLAN PERIOD
02	CONCEPTUAL PERIOD
PLANTATION	

GEOLOGICAL INDEX	
01	GITTIBOULDER (GRANITE)

CONCEPTUAL PLAN  
 GRANITE STONE, KHANDA, GITTY,  
 BOULDER STONE MINE  
 M/S BAJRANG ROAD LINES PARTNER  
 SHRI SURESH PRATAP SINGH  
 S/O SHRI TEJ PRATAP SINGH  
 R/O VILLAGE AND POST- MAU, 584,  
 KATRA LALGANJ,  
 TEHSIL - GAURIGANJ, DISTRICT- AMETHI,  
 GATA NO. 1876 (KHAND- 04)  
 AREA - 1.21ha.  
 VILLAGE- GIRWAN, TEHSIL- NARAINI,  
 DISTRICT- BANDA (U.P.)



SANDEEP  
 RQP/UPDGM/No. 25°18'22.24"N 80°23'0.67"E  
 MAR 2019



## LIST OF ANNEXURES

<b>ANNEXURE-I</b>	Letter of Intent issued by District Magistrate.
<b>ANNEXURE-II</b>	khasra Map.
<b>ANNEXURE-III</b>	Google map of 500 m buffer zone indicating project site.



  
SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

# **ANNEXURE – I**

**(Letter of Intent issued by  
District Magistrate)**



  
SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

**कार्यालय जिलाधिकारी, बाँदा।**

(खनिज अनुभाग)

पत्रांक : 2330 / खनिज-30, बाँदा

दिनांक : 21/11/2020  
सितम्बर 06, 2020**सहमति-पत्र (लेटर ऑफ इन्टेंट)**

श्री बजरंग रोड लाइन्स

पता-करनपुर, नियर कुण्डनगंज,

रेलवे स्टेशन, जिला रायबरेली।

पिनकोड-229001

पार्टनर श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह

निवासी-ग्राम व पो 0 मऊ, 584, कटरा लालगंज, तहसील गौरीगंज,

जिला अमेठी। पिनकोड-227409

भूतत्व एवं खनिकर्म विभाग, उ०प्र०, शासन लखनऊ के शासनादेश संख्या-3236/86-2017/57(सा)/2017 दिनांक 12.12.2017 एवं शासनादेश संख्या-2169/86-2019-57(सा०)/2017 टी०सी०-1 दिनांक 09.10.2019 में दिये गये निर्देशानुसार ई-निविदा सह ई-नीलामी प्रणाली के माध्यम से उ०प्र० उपखनिज (परिहार) नियमावली-1963 के अध्याय-4 के अन्तर्गत खनन पट्टा पर स्वीकृत किये जाने हेतु विज्ञप्ति सं०-69/खनिज-30, बाँदा दिनांक 27.01.2020 जारी की गयी। उपरोक्त विज्ञप्ति के क्रम में आप द्वारा जनपद बाँदा की तहसील नरैनी स्थित ग्राम-गिरवाँ के गाटा सं०-1876 (खण्ड सं०-4) रकबा 1.21 हे० में मात्रा 12,100 घनमीटर प्रतिवर्ष उपलब्ध उपखनिज ग्रेनाइट, गिट्टी, खण्डा, बोल्टर हेतु रु० 331.00 प्रति घनमीटर की दर से ई-निविदा सह ई-नीलामी में बोली दी गयी है, जो कि सर्वाधिक है। जिलाधिकारी महोदय के आदेश दिनांक 20.06.2020 द्वारा उक्त खनन पट्टा स्वीकृत किये जाने की अनुमति प्रदान कर दी गयी है।

शासनादेश दिनांक 09.10.2019 के बिन्दु सं०-10(2) के अनुसार "लेटर आफ इन्टेंट प्राप्त होने के उपरान्त 02 कार्य दिवस के अन्दर प्री-बिड अर्नेस्ट मनी को समायोजित करते हुये पट्टे के प्रथम वर्ष के लिये निर्धारित पट्टा धनराशि रु० 40,05,100.00 (12100 x 331) का 50 प्रतिशत के समतुल्य धनराशि रु० 20,02,550.00 (25 प्रतिशत प्रतिभूति एवं 25 प्रतिशत प्रथम वर्ष की प्रथम किस्त के रूप में) निर्धारित लेखा शीर्षक के अन्दर जमा किया जाना होगा। यदि सफल बोलीदाता/निविदादाता उक्त धनराशि जमा करने में असफल होता है तो उसके द्वारा जमा अर्नेस्ट मनी जब्त कर ली जायेगी और उसके द्वारा इस सम्बन्ध में कोई शिकायत अथवा प्रत्यावेदन विचार योग्य नहीं होगा।"

शासनादेश दिनांक 09.10.2019 में दी गयी शर्त :-

- (1) प्रथम वर्ष के लिए देय नीलामी/पट्टा धनराशि की गणना पट्टा क्षेत्र के लिये विज्ञप्ति में निर्धारित मात्रा घन मी० को ई-निविदा/ई-नीलामी की दर रूपया प्रति घन मी० से गुणा कर निकाली जायेगी। खनन पट्टा के अनुवर्ती वर्षों में प्रत्येक वर्ष पिछले वर्ष की नीलामी की देय धनराशि पर 10 प्रतिशत की वार्षिक वृद्धि की जायेगी तथा तदनुसार अनुवर्ती वर्षों की नीलामी धनराशि में वृद्धि होगी, तदनुसार प्रत्येक वर्ष निर्धारित नीलाम की धनराशि को नियमावली-1963 के चतुर्थ अनुसूची के अनुसार त्रैमासिक किस्त अग्रिम रूप से जमा की जायेगी।
- (2) प्रस्तावक को नियम-17 के प्रावधानों के अनुसार रु० 8,000.00 जमा कराकर क्षेत्र का सीमांकन कराएगा, जिसमें सीमा बिन्दुओं का जियो-कोर्डिनेट्स भी इंगित किया जायेगा तथा नियम-35 के अनुसार सीमा स्तम्भ लगायेगा तथा इसका अनुरक्षण करेगा।
- (3) लेटर आफ इन्टेंट जारी होने के एक माह के अन्दर अनुमोदित हेतु देय प्रतिभूति एवं प्रथम किस्त की धनराशि जमा होने के प्रमाण सहित, खनन योजना निदेशक, भूतत्व एवं खनिकर्म के समक्ष प्रस्तुत किया जायेगा। अनुमोदित खनन योजना प्राप्त होने के एक माह के अन्दर सक्षम प्राधिकरण के समक्ष पर्यावरण अनापत्ति प्रमाण-पत्र हेतु प्रस्ताव प्रस्तुत किया जाना अनिवार्य होगा।

2 11 8

(2)

- (4) पर्यावरण अनापत्ति प्रमाण-पत्र प्राप्ति के एक माह के भीतर पट्टा विलेख का निष्पादन किया जाना होगा। पट्टा विलेख के निष्पादन के दिनांक से 03 माह के भीतर खनन संक्रियायें प्रारम्भ की जानी हैं।
- (5) प्रस्तावक द्वारा नियम-34 के अनुसार क्षेत्र के भूमि-उद्धार और पुर्नवासन उपाय हेतु वित्तीय आश्वासन की धनराशि ₹0 2,00,000.00 की बैंक गारण्टी एफ0डी0आर0, जो जिलाधिकारी बाँदा के पक्ष में 10 वर्ष के लिये बंधक हो, को जमा करेगा।
- (6) प्रस्तावक को भारतीय स्टाम्प अधिनियम के प्राविधानों के तहत निर्धारित स्टाम्प पर पट्टा विलेख का निष्पादन कराने के पश्चात ही उपखनिजों के खनन एवं परिवहन की अनुमति होगी।

अतः आपको निर्देशित किया जाता है कि सहमति पत्र (लेटर ऑफ इन्टेंट) प्राप्ति के दो कार्य दिवस के अन्दर प्रथम वर्ष हेतु निर्धारित पट्टा की सकल धनराशि का 50 प्रतिशत के समतुल्य धनराशि ₹0 20,02,550.00 (बीस लाख दो हजार पांच सौ पचास रुपये मात्र) में जमा अर्नेस्ट मनी ₹0 4,84,000.00 को समायोजित करते हुये अवशेष धनराशि ₹0 15,18,550.00 (पंद्रह लाख अठ्ठारह हजार पांच सौ पचास रुपये मात्र) को जनपद के निर्धारित लेखा शीर्षक "0853-अलौह-खनन तथा धातुकर्म उद्योग-102 खनिज रियायत शुल्क किराया और स्वत्व शुल्क-01 खनिज रियायत शुल्क किराया और स्वत्व शुल्क" में जमा कर घालान की मूलप्रति खनिज कार्यालय, बाँदा में उपलब्ध कराना सुनिश्चित करें। यदि विनिर्दिष्ट अवधि में उक्त धनराशि को जमा नहीं किया जाता है तो आपके पक्ष में निर्गत सहमति पत्र को निरस्त करते हुये आप द्वारा जमा अर्नेस्ट मनी की धनराशि को राज्य सरकार के पक्ष में जब्त कर लिया जायेगा, जिसके लिये उत्तरदायी आप स्वयं होंगे।

26.11.2020

(संतोष बहादुर सिंह)  
अपर जिलाधिकारी (वि0/रा0)/  
कृते जिलाधिकारी, बाँदा।

पत्रांक व दिनांक तदैव।

प्रतिलिपि : निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. सचिव, भूतत्व एवं खनिकर्म विभाग, उ0प्र0 शासन, लखनऊ।
2. निदेशक, भूतत्व एवं खनिकर्म निदेशालय, उ0प्र0, लखनऊ।
3. शाखा प्रबन्धक, एम0एस0टी0सी0 लिमिटेड, द्वितीय तल सेन्टर कोर्ट बिल्डिंग 5, पार्क रोड हजरतगंज, लखनऊ।

अपर जिलाधिकारी (वि0/रा0)/  
कृते जिलाधिकारी, बाँदा।



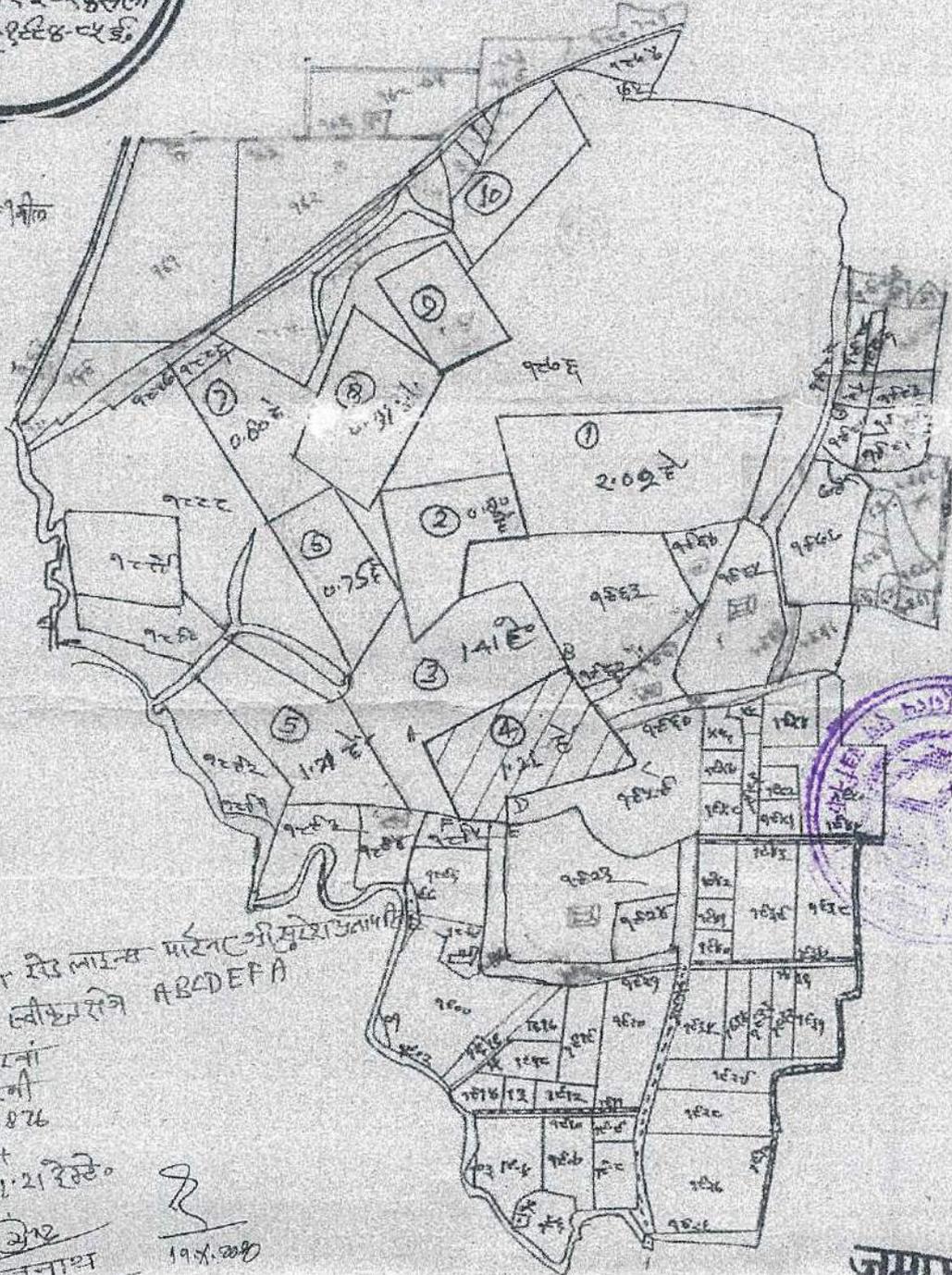
**ANNEXURE – II**  
**(CERTIFIED**  
**KHASRA MAP)**



  
SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

अ. खिन्ना  
**ग्राम-गिरवाँ**  
 परगना व तहसील नरैनी  
**जिला-बाँदा**  
 चक्र बन्दीविषय १३६२ फसल  
 तदनुसार सन् १९९४-९५ ई.

पैमाना: १ इंच = १ मील



श्री नजरंग सिंह लाइन्स पार्टनर अकृषि उद्योगिक  
 ने परसभे स्वीकृतसभे ABCDEFA  
 ग्राम-गिरवाँ  
 तह. नरैनी  
 गाँव सं. 1876  
 खसति. 04  
 रकना 1.21 हेक्टे.

राजनाथ  
 अधिकारी सचिवक  
 खनिज विभाग  
 बाँदा

19.7.2019  
 खान अधिकारी  
 बाँदा

जमापुर

SANDEEP KUMAR  
 RQP/UPDGM/No.014/Year 2019

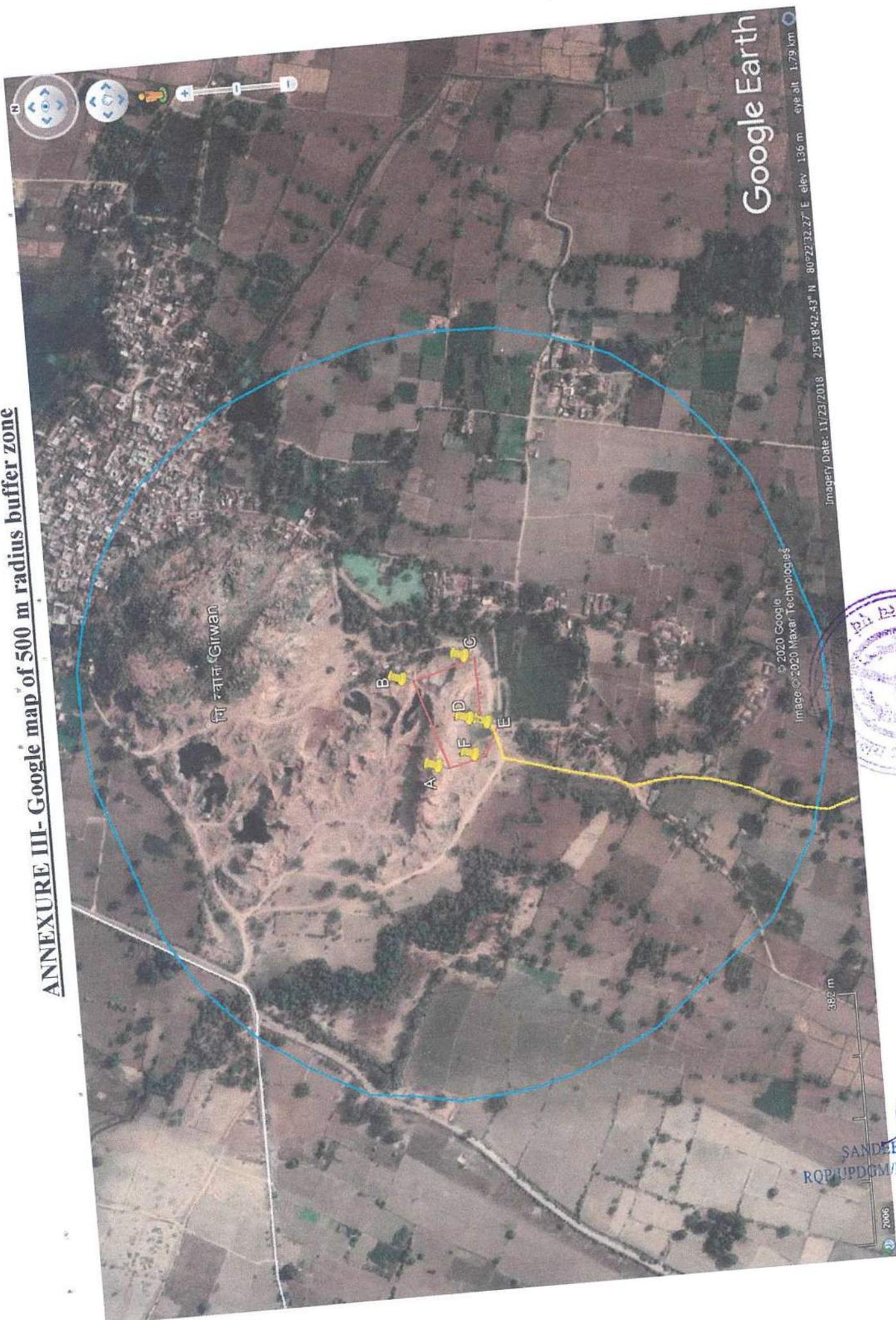
# ANNEXURE –III

(Google map of 500 m)



  
SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

**ANNEXURE III- Google map of 500 m radius buffer zone**



  
**SANDEEP KUMAR**  
 ROP/UPDGM/No.014/Year 2019

**AUTHORISATION LETTER BY THE LESSEE**

I, Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh, here by authorize Mr. Sandeep Kumar, RQP/UPDGM/014/2019 to prepare the Mining Plan of our Granite, Khanda, Gitty, Boulder Mining Gata No. 1876 (Khand- 04), over an area of 1.21 ha. (2.98 acre) located at Village- Girwan, Tehsil- Naraini, District- Banda, (U.P.) Under Rule 34(4) of Uttar Pradesh Miner Mineral Concession Rule 1963.

It is therefore requested to the Director, Directorate of Geology & Mining Lucknow to make further correspondence regarding modification and to collect the approved copies of the aforesaid Mining Plan with the said recognized person on his following address:

**Name of RQP** :- Mr. Sandeep Kumar  
RQP/UPDGM/014/2019



**Place:** Banda  
**Date:**

**Lessee**  
(Suresh Pratap Singh)

  
SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

**CERTIFICATE**

I, Mr Sandeep Kumar hereby certify that-

1. Provisions of Mines Act, Rules and Regulations made there under have been observed in the aforesaid Mining plan and wherever specific permissions are required the project proponent will approach the Director General of Mines Safety (DGMS).
2. It is further certified that the aforesaid Mining Plan is prepared as per the copies of the records and documents provided by lessee and information given as per discussions held with project proponent his representative.
3. It is also certified that the information furnished in the aforesaid Mining plan are true and correct to the best of my knowledge & belief and in case of default the approval would be withdrawn.



**Place: Lucknow**

**Date:**

**Prepared by**

**Name of RQP- Mr. Sandeep Kumar  
RQP/UPDGM/014/2019**

*S*  
**SANDEEP KUMAR**  
RQP/UPDGM/No.014/Year 2019

**DECLARATION**

Mining Plan with Mine Closure Plan in respect of Granite, Khanda, Gitty, Boulder Mining over an area 1.21 ha (2.98 acre) situated at Village- Girwan, Tehsil- Naraini, District- Banda (U.P.) of Shri Suresh Pratap Singh S/o Shri Tej Pratap Singh R/o Village and Post- Mau, 584, Katra Lalganj, Tehsil- Gauriganj, District- Amethi, (U.P.), has been prepared in full consultation with me and I understand its contents and agree to implement the same in accordance with law and in case of default the approval would be withdrawn.



**Place:** Banda

**Date:**

**Lessee**

(Suresh Pratap Singh)

SANDEEP KUMAR  
RQP/UPDGM/No.014/Year 2019

Form-B

# DIRECTORATE OF GEOLOGY AND MINING, UP



## CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON

(Under Rule 34 of U.P. Minor Minerals Concession Rules 1963)

**SHRI SANDEEP KUMAR S/o SHRI MAHIPAAL SINGH.**

R/o H.No.-500/14, Shakuntalam Awaas Vikas Colony, Circular Road, Muzaffar Nagar.

whose photograph and signature is affixed herein below, having given satisfactory evidence of his qualification & experience as required in rule-34 is here by RECOGNISED as a qualified person to prepare Mining Plan under Rule 34 of the U.P. Minor Mineral Concession Rules-1963.

1. His registration number is RQP/UPDGM/No. 014...../Year. 2019.....
2. This recognition is valid for a period of 05 years from **05-03-2019 to 04-03-2024**.
3. His office address is H.No.-500/14, Shakuntalam Awaas Vikas Colony, Circular Road, Muzaffar Nagar.
4. His mail ID-sjawla733@gmail.com.
5. Contact No.-8126253120.
6. This certificate will liable to be withdrawn/cancelled in the event of furnishing the wrong information in the Mining Plan or producing the wrong documents.
7. This certificate shall be valid only for preparation of mining plan of the areas within the territory of Uttar Pradesh and not for any other purposes.



Specimen Signature of RQP



Place: Lucknow

Date: 05. 03. 2019

(Dr. *Roshan Jacob*)

Director

SANDEEP KUMAR

RQP/UPDGM/No.014/Year 2019

**ANNEXURE IV**  
**500m cluster certificate**

## कार्यालय जिलाधिकारी, बाँदा।

(खनिज अनुभाग)

पत्रांक : 2242/खनिज-30, बाँदा

दिनांक : अक्टूबर 3, 2020

### क्लस्टर प्रमाण-पत्र

प्रमाणित किया जाता है कि श्री बजरंग रोड लाइन्स पता-करनपुर, नियर कुण्डनगंज, रेलवे स्टेशन, जिला रायबरेली पार्टनर श्री सुरेश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह निवासी-ग्राम व पो 0 मऊ, 584, कटरा लालगंज, तहसील गौरीगंज, जिला अमेठी को पत्रांक-2338/खनिज-30, बाँदा दिनांक 06.10.2020 के माध्यम से गाटा सं0-1876 (खण्ड सं0-4), ग्राम-गिरवां, तहसील नरैनी, जनपद बाँदा हेतु कुल रकबा 1.21 हे० गिट्टी/पत्थर के खनन क्षेत्र के संबंध में सहमति पत्र (एल०ओ०आई०) निर्गत किया गया है। ओ०ए० नं०-186/2016 सतेन्द्र पाण्डे बनाम पर्यावरण वन एवं जलवायु परिवर्तन, भारत सरकार व अन्य में मा० राष्ट्रीय हरित न्याधिकरण द्वारा पारित आदेश दिनांक 13.09.2018 एवं पर्यावरण वन एवं जलवायु परिवर्तन, भारत सरकार द्वारा जारी ओ०एम०नं०-L-11011/175/2018-IA-II(M) दिनांक 12.12.2018 के अनुसार प्रश्नगत खनन क्षेत्र की स्थिति निम्नवत है :-

अ) प्रश्नगत खनन क्षेत्र की परिधि से 500 मीटर की दूरी में कोई खनन क्षेत्र नहीं है। संबंधित प्रकरण 0 से 5 हेक्टेयर तक है। अतः श्रेणी बी-2 से आच्छादित होता है। (लागू नहीं)

अथवा

ब) प्रश्नगत खनन क्षेत्र की परिधि से 500 मीटर की दूरी में कोई खनन क्षेत्र नहीं है। संबंधित प्रकरण 5 हेक्टेयर से अधिक है। अतः परियोजना श्रेणी बी-1 से आच्छादित होता है। (लागू नहीं)

अथवा

स) प्रश्नगत खनन क्षेत्र की परिधि से 500 मीटर की दूरी में निम्नांकित खनन क्षेत्र है :-

1) गाटा सं०- NIL ग्राम NIL खनन क्षेत्र NIL हेक्टेअर

2) गाटा सं०- NIL ग्राम NIL खनन क्षेत्र NIL हेक्टेअर

उक्त सभी खनन क्षेत्रों का कुल योग.....हेक्टेयर (05 हे० से कम) है। अतः परियोजना श्रेणी बी-1 का क्लस्टर नहीं बनता है। संबंधित प्रकरण श्रेणी बी-2 से आच्छादित होता है। (लागू नहीं)

अथवा

द) प्रश्नगत खनन क्षेत्र की परिधि से 500 मीटर की दूरी में निम्नांकित खनन क्षेत्र है :-

1) गाटा सं०- 1876 (खण्ड सं०-1) ग्राम-गिरवां खनन क्षेत्र 2.02 हे० हेक्टेअर

2) गाटा सं०- 1876 (खण्ड सं०-2) ग्राम-गिरवां खनन क्षेत्र 0.80 हे० हेक्टेअर

3) गाटा सं०- 1876 (खण्ड सं०-3) ग्राम-गिरवां खनन क्षेत्र 1.41 हे० हेक्टेअर

4) गाटा सं०- 1876 (खण्ड सं०-5) ग्राम-गिरवां खनन क्षेत्र 1.21 हे० हेक्टेअर

5) गाटा सं०- 1876 (खण्ड सं०-6) ग्राम-गिरवां खनन क्षेत्र 0.75 हे० हेक्टेअर

6) गाटा सं०- 1876 (खण्ड सं०-8) ग्राम-गिरवां खनन क्षेत्र 0.91 हे० हेक्टेअर

उक्त खनन क्षेत्रों का कुल योग 8.31 (05 हे० से अधिक) है। संबंधित प्रकरण की श्रेणी बी-1 से आच्छादित होता है।

अथवा

घ) प्रश्नगत क्षेत्र की परिधि से 500 मीटर की दूरी में 100 हे० से अधिक निम्नांकित एकल खण्ड क्षेत्र है :-

1) गाटा सं०- NIL ग्राम NIL खनन क्षेत्र NIL हेक्टेअर

2) गाटा सं०- NIL ग्राम NIL खनन क्षेत्र NIL हेक्टेअर

संबंधित प्रकरण श्रेणी ए से आच्छादित होता है। (लागू नहीं)

यह भी प्रमाणित किया जाता है कि उपरोक्त विवरण में ई०ए०सी० भारत सरकार/एस०ई०आई०ए०ए०, यू०पी०/डी०ई०आई०ए०ए० से निर्गत पूर्व-पर्यावरणीय क्लीयरेंस के गाटा/खण्ड संख्या को सम्मिलित कर लिया गया है।

3112  
19/10/2020  
अधिकारी सर्वेक्षक  
बाँदा।

खान अधिकारी  
बाँदा।

**ANNEXURE V**  
**District Survey Report**

**कार्यालय जिलाधिकारी, बाँदा।**  
(खनिज अनुभाग)

पत्रांक : 1374 / खनिज-30, बाँदा

दिनांक : 31 अक्टूबर 13, 2019

**शुद्धि-पत्र**

सर्वसाधारण को सूचित किया जाता है कि "District Survey Report for (Planning and Execution of) Mining Minerals Excavation" दिनांक 12.02.2018 को अंतिम रूप से अनुमोदन कर जिले की वेबसाइट पर अपलोड किया गया था। जिला सर्वेक्षण रिपोर्ट के पृष्ठ सं०-28 से 30 में अंकित तालिका में उल्लिखित ग्रामों व उनके सम्पूर्ण क्षेत्रफल का उल्लेख है, जबकि निर्गत विज्ञप्ति में सम्पूर्ण क्षेत्रफल को खण्डवार कर विज्ञप्ति प्रकाशित की गई, जिला सर्वेक्षण रिपोर्ट में अंकित ग्राम व क्षेत्रफल तथा निर्गत लेटर आफ इन्टेंट (सहमति-पत्र) में उल्लिखित ग्राम व क्षेत्रफल में गिनता के कारण उक्त जिला सर्वेक्षण रिपोर्ट को खण्डवार तैयार कर संशोधित किया जाता है। तदनुसार DSR के पृष्ठ संख्या 28 से 30 की तालिका में उपलब्ध क्षेत्रफल को संशोधित समझा जाये एवं निम्नानुसार पढ़ा जायें।

**List of mining Quarries in the District with Location and Area in District Banda**

क्र० सं०	तहसील	उप खनिज का नाम	ग्राम	गाटा संख्या	खण्ड संख्या	रकबा (हे० में)	खनन की मात्रा (घन०मी० में)
1	2	3	4	5	6	7	8
1.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	बरुवास्योड़ा	41 व 42	02	2.00	20,000
2.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	बरुवास्योड़ा	41 व 42	03	2.00	20,000
3.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	बरुवास्योड़ा	41 व 42	04	2.00	20,000
4.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	बरुवास्योड़ा	42 व 44	05	1.46	14,600
5.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	यड़ोखर खुर्द	332	01	1.61	16,100
6.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	यड़ोखर खुर्द	332	02	1.61	16,100
7.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	यड़ोखर खुर्द	332	03	0.56	5600
8.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	यड़ोखर खुर्द	332	04	1.51	15,100
9.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	यड़ोखर खुर्द	332	05	0.40	4000
10.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	01	2.00	20,000
11.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	02	2.00	20,000
12.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	03	2.00	20,000
13.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	04	0.60	6000
14.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	05	2.00	20,000
15.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450	06	2.00	20,000
16.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2450 व 2451	07	1.21	12,100
17.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2451	01	2.50	25,000
18.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2451	02	1.21	12,100
19.	नरैनी	ग्रेनाइट गिट्टी, खण्डा, बोल्डर	जरर	2451	03	1.40	14,000



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-2-

Scanned by CamScanner

(2)

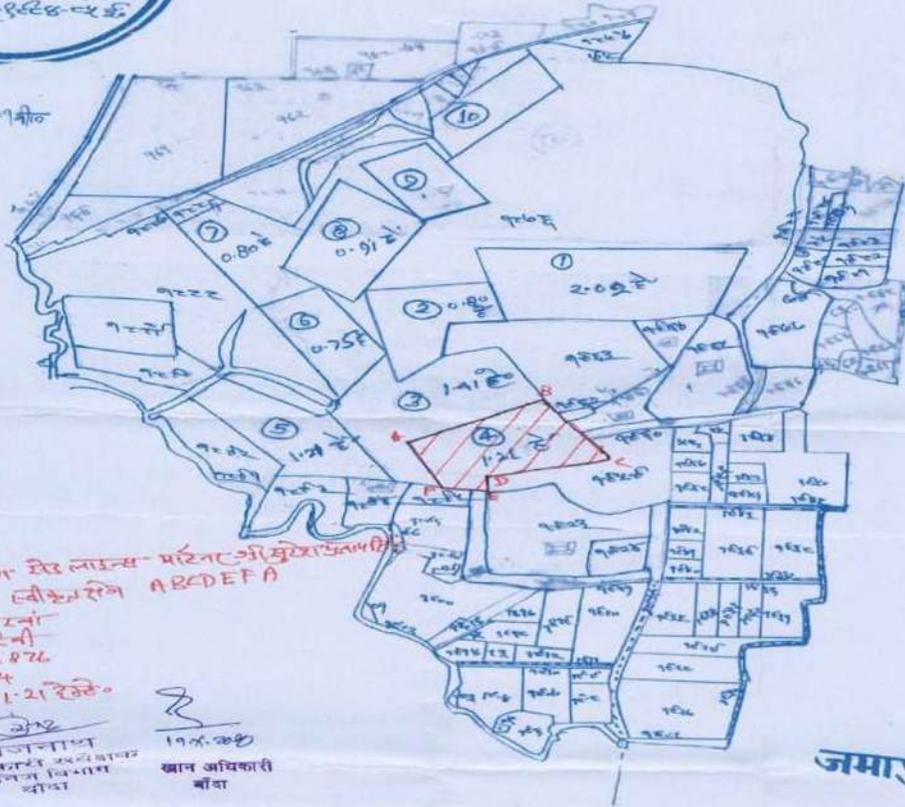
20.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	2451	04	0.80	8000
21.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	2451	05	2.75	27,500
22.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	1073	01	2.00	20,000
23.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	1073	02	2.00	20,000
24.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	1073	03	2.00	20,000
25.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	जारर	1073	04	2.00	20,000
26.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	01	2.02	20,200
27.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	02	0.80	8000
28.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	03	1.41	14,100
29.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	04	1.21	12,100
30.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	05	1.21	12,100
31.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	06	0.75	7500
32.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	07	0.80	8000
33.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	08	0.91	9100
34.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गिरवां	1876	09	0.50	5000
35.	नरैनी	गिट्टी/पत्थर व पहाडी मोरम	मसनी	315	01	2.00	20,000
36.	नरैनी	गिट्टी/पत्थर व पहाडी मोरम	मसनी	315	02	2.00	20,000
37.	नरैनी	गिट्टी/पत्थर व पहाडी मोरम	मसनी	315	03	2.00	20,000
38.	नरैनी	गिट्टी/पत्थर व पहाडी मोरम	मसनी	315	04	2.00	20,000
39.	नरैनी	गिट्टी/पत्थर व पहाडी मोरम	मसनी	315	05	2.00	20,000
40.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	पनगरा	314	01	1.20	12,000
41.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	पनगरा	314	02	1.00	10,000
42.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	पनगरा	314	04	0.628	6280
43.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	खलारी	45	—	3.68	36,800
44.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	खलारी	84	—	3.01	30,100
45.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	खलारी	144	—	3.75	37,500
46.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गहरी	218	01	2.00	20,000
47.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गहरी	218	02	2.00	20,000
48.	नरैनी	प्रेनाइट गिट्टी, खण्डा, बोल्डर	गहरी	634	01	2.25	22,500

## **ANNEXURE VI**

### **Khasra map showing geo- coordinate**



पैमाना: १६ इंच = १ किलो



ABCDEFA  
 श्री नजदेग सेर लाइन्स-मॉडल ऑफिस (जमापुर)  
 में परसने लीकुरेशन  
 ग्राम-गिरवा  
 तहसील-जेजो  
 माफा नं० १४७६  
 अक्षांश २५  
 रेखांश ८२-२१ इंचे

राजनाथ  
 जमीनदार अथवा  
 खानज विभाग  
 बोदा

१९४८  
 खान जमींदारी  
 बोदा

जमापुर

# **ANNEXURE VII**

## **Site Photographs**



# **ANNEXURE VIII**

## **Intimation Letter**

To,

Date: 09/10/2020

Member Secretary  
Uttar Pradesh Pollution Control Board  
Building.No. TC-12V, Vibhuti Khand, Gomti Nagar,  
Lucknow, Uttar Pradesh 226010

**Subject: Regarding intimation of collection of Baseline Monitoring Data for Post Monsoon season (Oct 2020 to Dec 2020) for the proposed Granite, Gitti, Khanda, Boulder mining project located at " Gata No. 1876 (Khand No. 04), area- 1.21 ha", Village- Girwan, Tehsil- Naraini, District- Banda Uttar Pradesh with total production quantity 12,100 cum per year.**

Reference No: LOI No:2338/अनिज-30, बाँदा

Dated 06.10.2020.

Dear Sir

This is to inform you that I have started collection of baseline monitoring data for the above mentioned project for **Post Monsoon Season (Oct 2020 to Dec 2020)** which will be further incorporated in the EIA/EMP Report.

I have appointed Noida Testing Laboratories (NABL accredited lab) for the above mentioned subject.

As per the Office Memorandum issued by the MoEF & CC dated 29th August 2017 (J-11013/41/2006-IA-11 (I) (Part) on clause no-VII,

*"The baseline data used for preparation of EIA/EMP reports may be collected at any stage, irrespective of the request for ToR or the issue thereof. However, such a baseline data and the public consultation should not be older than 3 years, at the time of submission of the proposal, for grant of Environmental Clearance, as per ToRs prescribed".*

Thanking You

Yours Truly,

Shri Bajrang Road Lines

R/o- Karanpur near Kundanganj, railway station, District Raebareilly  
Encl: LOI attached as annexure



CC: - Regional Officer  
Uttar Pradesh Pollution Control Board  
A-39, Avas Vikas Colony, Chilla Road, Banda-210001

**ANNEXURE IX**  
**Memorandum of**  
**Understanding**

**MEMORANDUM OF UNDERSTANDING**

To,  
The Director,  
M/s. Cognizance Research India Private Ltd.  
GT – 20, Sec – 117,  
Noida-201301

**Date:**

Please refer to your quotation for obtaining Environmental Clearance from the concerned authorities in respect of Girwan Granite, Khanda, Gitty, Boulder Mining Project Area 1.21 Ha. for a Production of 12100 m<sup>3</sup>/yr at Gata No: 1876 Khand No. 04, Village- Girwan, Tehsil-Naraini, District-Banda, State- Uttar Pradesh by M/s. M/s Bajrang Road Lines, Shri Suresh Pratap Singh and the consultant should be submitted and subsequent discussions on the subject.

The following terms have been mutually agreed:

**A. Scope of Work**

1. Prepration of Form I PFR for Application of ToR.
2. ToR Presentation.
3. Collecting Various Baseline data of different Environmental Parameters for prepration of Draft EIA.
4. Preparation of Draft EIA/ EMP Report covering ToR including points, typing, drafting etc. as per guidelines of MoEF and State Pollution Control Board.
5. Submission of Application Forms along with Draft EIA/EMP report to SPCB& cc to concerned departments as per the Appendix IV of the EIA Notification 2006.
6. Technical assistance in public hearing as per the appendix IV of the EIA Notification.
7. Submission of Final EIA/ EMP report to SEAC/SEIAA-UP incorporating the concerns rose during public hearing/consultation.
8. Presentation to Concerned committee/Authorities
9. Reply submission if query raised by committee.
10. Obtaining Environmental Clearance



**ANNEXURE X**

**Corporate Environmental  
Policy (CEP)**

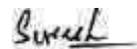
## Corporate Environmental Policy

I, **Shri Suresh Pratap Singh, S/o. Shri Tej Pratap Singh**, mine partner of Granite (khanda, gitty, boulder) mine at Gata No.1876, Khand No.-04, Village- Girwan, Tehsil-Naraini, District-Banda, Uttar Pradesh

I reaffirm my commitment to contributing towards a clean and sustainable environment and continually enhancing our environmental performance as an integral part of our business philosophy and values.

Towards this commitment, I shall:

- ) Integrate sound environmental management practices in all our activities.
- ) Conduct our operations in an environmentally responsible manner to comply with applicable legal and other requirements related to its environmental aspects and strive to go beyond.
- ) Progressively adopt cleaner and energy efficient technologies.
- ) Increase greenery in and around our working areas and mines.
- ) Strive for continual improvement in our environmental performance by setting challenging targets, measuring progress, taking corrective action and communicating environmental information to all concerned.
- ) Enhance environmental awareness amongst employees working for and on behalf of us and the general populace around working areas and mines.
- ) Encourage our business associates to adopt similar approach for environmental protection.



**Signature**

**ANNEXURE XI**  
**Public Hearing Proceeding**



# उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

दूरभाष नं०- 05192-220048  
ई-मेल- robanda@uppcb.in

क्षेत्रीय कार्यालय: 34ए, निकट संत तुलसी पब्लिक स्कूल, गेट नं०-2,  
इन्दिरा नगर, चिल्ला रोड, बाँदा

सन्दर्भ सं०. 144/लोक सुनवाई /2021

Date. 16.8.21.....

सेवा में,

सदस्य सचिव,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
लखनऊ।

विषय : मैसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बाँदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) में अवयस्क खनिज ग्रेनाइट, खण्डा, गिट्टी एवं बोल्टर के खनन पट्टे हेतु परियोजना की पर्यावरणीय स्वीकृति हेतु दिनांक-11.08.2021 को तहसील-नरैनी सभागार, जनपद-बाँदा (उ०प्र०) में आयोजित लोक सुनवाई का कार्यवृत्त के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक बोर्ड मुख्यालय के पत्र सं०- एच62403/सी-2/एनओसी-4709 /21 दिनांक 16.06.2021 का संदर्भ ग्रहण करने का कष्ट करें। जिसके अनुपालन में उपरोक्त संदर्भित अवयस्क खनिज ग्रेनाइट, खण्डा, गिट्टी एवं बोल्टर खनन परियोजना की पर्यावरणीय स्वीकृति हेतु लोकसुनवाई स्थल तहसील-नरैनी सभागार, जनपद-बाँदा (उ०प्र०) में दिनांक 11.08.2021 को आयोजित करायी गई। उक्त लोकसुनवाई की कार्यवृत्त (मूलरूप में) उपस्थिति के विवरण की छायाप्रति तथा सी०डी० की दो प्रतियां पत्र के साथ संलग्न कर आवश्यक कार्यवाही हेतु सादर प्रेषित है।

संलग्नक: उपरोक्तानुसार।

भवदीय

(घनश्याम)

क्षेत्रीय अधिकारी

प्रतिलिपि: मुख्य पर्यावरण अधिकारी (वृत्त-2), उ०प्र० प्रदूषण नियंत्रण बोर्ड लखनऊ को सूचनार्थ सादर प्रेषित।

क्षेत्रीय अधिकारी

मैसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बॉदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) में अवयस्क खनिज ग्रेनाइट, खण्डा, गिट्टी एवं बोल्टर के खनन पट्टे हेतु परियोजना की पर्यावरणीय स्वीकृति हेतु दिनांक-11.08.2021 को तहसील-नरैनी सभागार, जनपद-बॉदा (उ०प्र०) में आयोजित लोक सुनवाई का कार्यवृत्त :-

उपरोक्त संदर्भित खनन परियोजना की पर्यावरण स्वीकृति प्राप्त करने विषयक परियोजना प्रस्तावक श्री सुरेश प्रताप सिंह, नि०-ग्राम व पोस्ट- मऊ, 584, कटरा, लालगंज, तहसील-गौरीगंज, जनपद-अमेठी (उ०प्र०) के आवेदन पत्र मैसर्स बजरंग रोड लाइन्स (पार्टनर श्री सुरेश प्रताप सिंह) के पक्ष में स्वीकृत गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बॉदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) पर सम्यक विचारोपरान्त बोर्ड के पत्र संख्या-एच62403/सी-2/एनओसी-4709/21 दिनांक 16.06.2021, जो कि जिलाधिकारी, जनपद-बॉदा को सम्बोधित तथा क्षेत्रीय अधिकारी उ०प्र० प्रदूषण नियंत्रण बोर्ड, बॉदा एवं अन्य को पृष्ठांकित है, के निर्देशों के अनुपालन में क्षेत्रीय अधिकारी उ०प्र० प्रदूषण नियंत्रण बोर्ड, बॉदा के अनुरोध पर जिलाधिकारी, जनपद-बॉदा द्वारा दिनांक 11.08.2021 को अपराह्न 12.00 बजे तहसील-नरैनी सभागार, जनपद-बॉदा (उ०प्र०) नियत की गई थी। पर्यावरण एवं वन मंत्रालय भारत सरकार द्वारा पर्यावरण (संरक्षण) अधिनियम 1986 धारा-3 की उपधारा (1) (2) के खण्ड अ के अन्तर्गत पर्यावरण समाघात निर्धारण अधिसूचना संख्या- एस०ओ०-1533 दिनांक 14.09.2006 एवं यथा संशोधित में वर्णित प्राविधानों के अन्तर्गत नियत दिनांक से एक माह पूर्व दैनिक समाचार पत्र "राष्ट्रीय सहारा" (हिन्दी) के कानपुर अंक एवं दैनिक समाचार पत्र "दि इण्डियन एक्सप्रेस" (अंग्रेजी) के लखनऊ के अंक में दिनांक 09.07.2021 को प्रकाशित करायी गयी थी।

आज दिनांक 11.08.2021 को जिलाधिकारी महोदय, बॉदा द्वारा नामित अपरजिलाधिकारी (वि०/रा०), द्वारा मौखिक निर्देशानुसार उपजिलाधिकारी, नरैनी की अध्यक्षता में पर्यावरणीय लोक सुनवाई का आयोजन तहसील-नरैनी सभागार, जनपद-बॉदा (उ०प्र०) में किया गया। उक्त लोक सुनवाई में मुख्य रूप से निम्न सदस्य उपस्थित रहे-

1. श्री संतोष बहादुर सिंह, अपरजिलाधिकारी (वि०/रा०), अध्यक्ष लोक सुनवाई जनपद-बॉदा।
2. श्रीमती वंदिता श्रीवास्तव, उपजिलाधिकारी, तहसील-नरैनी, जनपद- बॉदा।
3. डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बॉदा।
4. श्री ईश्वर चन्द्र, खान निरीक्षक, खनिज विभाग, बॉदा।
5. श्री रामदास, वैज्ञानिक सहायक, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बॉदा।
6. श्री दीपक कुमार शुक्ला, परामर्शी मैसर्स काग्नीजेंस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०)।

अन्य उपस्थित सदस्यों की उपस्थिति की छायाप्रति संलग्न है।

डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी, उ०प्र० प्रदूषण नियंत्रण बोर्ड, बॉदा द्वारा लोक सुनवाई के सम्बन्ध में उपस्थित जनसमुदाय को अवगत कराया गया कि उक्त परियोजना में (खण्डाज, गिट्टी एवं बोल्टर) बिल्डिंग मैटेरियल खनन कार्य हेतु गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बॉदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) में प्रस्तावित है।



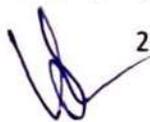

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उपरोक्त अधिसूचना में वर्णित प्राविधानों के अनुसार किसी भी खनन परियोजना को प्रारम्भ करने से पूर्व उ०प्र० सरकार द्वारा गठित स्टेट इनवायरमेन्ट इम्पैक्ट असिसमेन्ट अथारिटी से पर्यावरणीय स्वीकृति प्राप्त किया जाना अनिवार्य है। उक्त प्रस्तावित परियोजना को पर्यावरणीय स्वीकृति निर्गत करने के पूर्व खनन क्षेत्र के आस-पास लोकसुनवाई आयोजित किया जाना प्रविधानित है परन्तु प्रमुख सचिव, उ०प्र० शासन, पर्यावरण अनुभाग-2, लखनऊ के पत्र सं०-532/55-पर्या-2-2018-103(पर्या)/2007 दिनांक 23.04.2018, पर्यावरण अनापत्ति के प्रकरणों में त्वरित कार्यवाही से सम्बन्धित निदेशक, भूतत्व व खनिकर्म निदेशालय, उ०प्र० लखनऊ के पत्र सं०-1133/एम०/21(पर्या)/2011(II) दिनांक 07.08.2021 के अनुसार एक तहसील के क्षेत्रों पर तहसील मुख्यालय समेकित सुनवाई को कराये जाने का उल्लेख किया गया है। प्रस्तावित परियोजना के सम्बन्ध में जिलाधिकारी जनपद-बोंदा के पत्र संख्या 2338/खनिज-30, बोंदा दिनांक 06.10.2020 के द्वारा सहमति पत्र (लेटर ऑफ इन्टेंट) सशर्त निर्गत किया गया है, इसके अतिरिक्त उपरोक्त संदर्भित प्रस्तावित परियोजना को राज्य स्तरीय पर्यावरण प्रभाव निर्धारण प्राधिकरण समिति उ०प्र० में प्रस्तुतिकरण के पश्चात पत्र संख्या-831/ Parya/SEAC/6104/2019 दिनांक 22.03.2021 टर्म्स ऑफ रिफरेन्स (टोर) प्रदान किया गया है। इसके अतिरिक्त यह भी अवगत कराया गया कि पट्टेधारक द्वारा मैसर्स काग्नीजेंस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०) को परामर्शी नियुक्त किया गया है तथा परियोजना से सम्बन्धित पर्यावरणीय प्रभाव मूल्यांकन एवं पर्यावरणीय प्रबंधन योजना बोर्ड में प्रस्तुत की गई है, जिसकी एक-एक प्रति उपरोक्त सन्दर्भित अधिसूचना में वर्णित प्राविधानों के अन्तर्गत जिलाधिकारी कार्यालय बोंदा, जिला उद्योग केन्द्र बोंदा, एवं जिला पंचायत बोंदा के कार्यालयों में जनता के सुझाव, विचार, टीका-टिप्पणी प्रेषित करने हेतु उपलब्ध करायी गयी। उक्त परियोजना के सम्बन्ध में उपरिथत जनसमुदाय को विस्तृत विवरण से अवगत कराने हेतु सहायक वैज्ञानिक अधिकारी द्वारा बैठक में उपस्थित परामर्शी से आग्रह किया गया।

परामर्शी मैसर्स काग्नीजेंस रिसर्च, इण्डिया प्रा०लि०, जीटी-20, सेक्टर-117, नोएडा (उ०प्र०) के प्रतिनिधि श्री दीपक शुक्ला द्वारा अवगत कराया गया कि प्रस्तावित परियोजना गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद- बोंदा उ०प्र० की है। प्रस्तावित खनन खुली खान अर्द्ध-यांत्रिक प्रक्रिया के दौरान किया जायेगा। वर्षा ऋतु में खनन कार्य पूर्ण रूप से प्रतिबन्धित है तथा खनन कार्य दिन में ही किया जायेगा। खण्डा, गिट्टी एवं बोल्टर अर्द्ध-यांत्रिक प्रक्रिया से एकत्रित किया जायेगा तथा वाहन में सेमी मैकेनाइज्ड विधि द्वारा लोड किया जायेगा। पर्यावरण प्रबन्धन योजना प्रभाव क्षेत्र को ध्यान में रखकर बनायी गयी है। परियोजना में किसी भी प्रकार का निर्माण कार्य नहीं किया जायेगा। प्रस्तावित परियोजना के लिये निकटतम ग्रामवासियों द्वारा ही मजदूरी ली जायेगी परन्तु एक अस्थाई कार्यालय का निर्माण किया जायेगा। जिसमें कार्य करने वाले मजदूरों के लिए समुचित व्यवस्था (जलपान गृह, विश्रामालय, टॉयलेट एवं फर्स्टएड की व्यवस्था इत्यादि) की जायेगी।

परामर्शी द्वारा अवगत कराया गया कि उक्त खनन राजकीय एवं निजी निर्माण हेतु प्रयोग किया जाता है, परन्तु भारत सरकार द्वारा वर्णित प्राविधानों के अन्तर्गत किसी भी खनन कार्य से पर्यावरण पर पडने वाले प्रभावों को यथासम्भव कम करने हेतु पर्यावरणीय प्रबन्धन योजना तैयार कर प्रस्तुति की जानी होती है। ध्वनि एवं वायु प्रदूषण नियंत्रण हेतु उक्त परियोजना में कार्य करने वाले श्रमिकों को प्रशिक्षण देकर यह सुनिश्चित किया जायेगा कि उक्त परियोजना से पर्यावरण प्रभावित न हो। परियोजना के शुरू होने से आस-पास के क्षेत्रों के भौतिक आधारभूत संरचना में सुधार होगा


(जैसे बेहतर सड़क, पेयजल सुविधाओं में सुधार, बाजार स्थान और अन्य) प्रस्तावित परियोजना में सरकार को रॉयल्टी प्राप्त होगी। यहाँ ओपन कास्ट अर्द्ध मशीनरीकृत खनन किया जायेगा। प्रस्तावित परियोजना में कार्य करने वाले समस्त श्रमिकों के स्वास्थ्य की पूर्ण जिम्मेदारी पट्टेधारक की होगी तथा परियोजना के प्रारम्भ होने पर निकटतम ग्रामवासियों को रोजगार की प्राप्ति होगी। खनन कार्य के परिवहन हेतु ट्रकों के आवागमन से उत्पन्न धूल के नियंत्रण हेतु परियोजना में जल छिड़काव की व्यवस्था का प्राविधान किया गया है। पट्टेधारक द्वारा समय-समय से पानी का छिड़काव किया जायेगा। परामर्शी द्वारा अवगत कराया गया कि मात्र ब्लैस्टिंग का कार्य मध्य रात्रि में किया जायेगा। ध्वनि प्रदूषण के नियंत्रण हेतु वाहन चालकों को अनावश्यक प्रेशर हार्न का प्रयोग न करने हेतु निर्देश दिये जायेंगे। खनन कार्य दिन के समय ही किया जायेगा। संस्था द्वारा जल/वायु एवं ध्वनि आदि से सम्बन्धित नमूने एकत्रित किये गये हैं। विश्लेषण के उपरान्त प्रचालक केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी मानकों के अनुरूप पाये गये हैं।

परामर्शी द्वारा यह अवगत भी अवगत कराया गया कि पर्यावरण एवं वन मंत्रालय, भारत सरकार के पर्यावरण आंकलन अधिसूचना-2006 के अनुसार खनन पट्टे के संचालन से पूर्व पर्यावरणीय क्लियरेंस लेना जरूरी है इसलिए अभी तक खनन पट्टे का संचालन लंबित है। इस विषय में सम्बन्धित परियोजना की आई ए/ई0एम0पी0(ड्राफ्ट) को फील्ड मॉनीटरिंग और एकत्रित सेकेण्डरी आंकड़ों के आधार पर तैयार किया गया है।

उपरोक्त के उपरान्त डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी, बॉदा द्वारा लोक सुनवाई के समय उपस्थित ग्रामवासियों से अपने-अपने शिकायतें/आपत्तियां/सुझाव आदि प्रस्तुत किये जाने हेतु आमंत्रित किया गया।

सर्वप्रथम श्री ऋषि अवस्थी, ग्राम गिरवां, जनपद-बॉदा द्वारा सुझाव दिया गया कि खनन कार्य के समय धूल नियंत्रण हेतु व्यवस्था की जाये, अवैध खनन न किया जाये एवं खनन के समय अत्यधिक ध्वनि प्रदूषण होता है जिसके नियंत्रण हेतु व्यवस्था की जाये ?

परामर्शी श्री दीपक शुक्ला द्वारा अवगत कराया गया कि खनन का कार्य ग्रामवासियों द्वारा ही लिया जायेगा तथा खदान में खनन नीति/माइनिंग प्लान के अनुसार ही खनन कार्य किया जायेगा, खनन कार्य से उत्पन्न धूल के नियंत्रण हेतु जन का छिड़काव तथा खदान के आस-पास पर्यावरण के संरक्षण हेतु वृक्षारोपण किया जायेगा एवं ध्वनि प्रदूषण को नियंत्रण किये जाने हेतु अधिकतम खनन कार्य दिन में किया जायेगा एवं कंट्रोल ब्लैस्टिंग की जायेगी जिससे आस-पास के ग्राम वासियों को ध्वनि सम्बन्धी कोई समस्या न हो।

तत्पश्चात् पट्टेधारक श्री सुरेश प्रताप सिंह द्वारा ग्रामवासियों को आश्वासन दिया गया कि सरकार बनायी गई नियमावली के मानकों के अनुसार ही खनन कार्य किया जायेगा एवं ग्रामवासियों द्वारा जो समस्याएं बतायी गई हैं उनका समय से निस्तारण किया जायेगा एवं ग्रामवासियों द्वारा दिये गये सुझावों पर भी विचार किया जायेगा, तथा मेरे द्वारा यह प्रयास किया जायेगा कि खनन संचालन के समय ग्रामवासियों को किसी भी प्रकार की समस्या न हो तथा निकटतम ग्रामवासियों द्वारा कार्यक्षमता के अनुसार रोजगार उपलब्ध कराया जायेगा। वृक्षारोपण कराया जायेगा तथा सी0ई0आर0 के अन्तर्गत ग्राम विकास के कार्य किये जायेंगे तथा पर्यावरण संरक्षण हेतु नियमानुसार कार्य किये जायेंगे एवं ड्राफ्ट इन्वायमेंट इम्पैक्ट असेसमेंट एण्ड इन्वायमेंट मैनेजमेंट प्लान में प्रेषित की गई प्रस्तावना में शर्तों का पूर्णतः अनुपालन किया जायेगा तथा ईआईए रिपोर्ट में लिखित रूप में प्रशासन

को जमा की गयी है तथा ग्रामवासियों को किसी भी प्रकार की समस्या होने पर उनकी समस्याओं का निस्तारण किया जायेगा।

उपजिलाधिकारी, नरैनी द्वारा ग्रामवासिया को अवगत कराया गया कि गाटा नं०-1876, खण्ड नं०-04, ग्राम-गिरवां, तहसील-नरैनी, जनपद-बौदा उ०प्र० के क्षेत्रफल 1.21 हे०, (क्षमता 12,100.00 घन मी०/वर्ष) खनन क्षेत्र की जो प्रस्तावना प्रस्तुत की गयी है उसमें यदि आपको कोई शिकायत या सुझाव है तो आप अपना पक्ष रख सकते हैं तथा साथ ही सी०ई०आर० के अन्तर्गत प्रस्तुत प्रस्तावना के अनुसार पट्टेधारक द्वारा सभी कार्य समयानुसार किये जायेंगे एवं ग्रामवासियों को प्राथमिकता के आधार पर रोजगार उपलब्ध कराया जाये। साथ ही ग्रामवासियों को यदि बाद में भी पट्टे संचालन के समय कोई भी समस्या होती है तो उनके द्वारा उपजिलाधिकारी, खान अधिकारी, एवं शासन-प्रशासन को सूचना दी जा सकती है तथा ग्रामविकास हेतु नियमानुसार खनिज निधि के अनुसार कार्य किया जायेगा, उक्त स्थल पर तार फैसिंग अवश्य कराये एवं पर्यावरण संरक्षण हेतु अधिक से अधिक वृक्षारोपण किया जाये एवं प्रत्येक 6 माह में कम्पलायंस रिपोर्ट जमा करनी होगी।

डॉ० माधवी कमलवंशी, सहायक वैज्ञानिक अधिकारी द्वारा ग्रामवासियों को पर्यावरण संरक्षण हेतु पालीथीन का प्रयोग न किया जाना, अत्यधिक वृक्षारोपण किया जाना, हार्न का अनावश्यक न बनजे दिया जाना, ब्लास्टिंग मानदण्डों का कड़ाई से पालन करना आदि सुझाव दिये गये। अन्त में उपस्थित जनसमुदाय का आभार प्रकट करते हुए उपजिलाधिकारी नरैनी से लोकसुनवाई के समापन हेतु आवश्यक अनुमति प्राप्त कर लोक सुनवाई के समापन की घोषणा की गयी।

  
(डॉ० माधवी कमलवंशी)  
सहा० वैज्ञानिक अधिकारी,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
बौदा।

  
(वंदिता श्रीवास्तव)  
उपजिलाधिकारी, तहसील-नरैनी,  
जनपद-बौदा।

  
11.08.21  
(संतोष बहादुर सिंह)  
अपर जिलाधिकारी (वि०/रा०)  
जनपद-बौदा।

## लोक सुनवाई

मैसर्स- बजरंग रोड लाइन्स पार्टनर्स एंड सुरुश प्रताप सिंह पुत्र श्री तेज प्रताप सिंह, गिवाली- ग्राम, पोस्ट- मऊ, 584. कटवा, लालगंज, तहसील- गौरीगंज, जिला- अमेठी, उत्तर प्रदेश के द्वारा ग्राम-गिरवां के गाटा संख्या- 1876, खण्ड नं०- 04 के क्षेत्रफल 1.21 हेक्टेयर में क्षमता 12,100 घनमी०/वर्ष के लिए नरैनी तहसील, जिला बाँदा 30 प्र० में उपखनिज ग्रेनाइट, खण्डा, गिट्टी, बोल्टर खनन परियोजना के लिए पर्यावरण एवं वन मंत्रालय, भारत सरकार द्वारा जारी अधिसूचनाए० ओ० 1533 दिनांक 14.09.2006 तथा संशोधित ए० ओ० 3067 दिनांक 01.12.2009 के प्राविधान के तहत पर्यावरणीय स्वीकृति हेतु प्रेषित प्रस्ताव पर लोक सुनवाई

सुनवाई स्थल : नरैनी तहसील सभागार जिला बाँदा  
 (दिनांक -11/08/2021) समय रु 12:00 बजे मध्याह्न  
 आयोजक- क्षेत्रीय कार्यालय प्रदूषण नियंत्रण बोर्ड, बाँदा



