PRE-FEASIBILITY REPORT

(Prepared As per MOEF & Climate Change OM No. J-11013/41/2006-IA. II (I)
dated: 30/12/2010.)

"BUILDING STONE (KHANDA, GITTI, BOULDER) MINING"
AT
VILLAGE- SIRBO,
TEHSIL-GARAUTHA,
DISTRICT- JHANSI,
STATE- UTTAR PRADESH
(AREA- 2.023Ha)

Submitted by

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1. Executive Summary

The proposed Mining of Building Stone located at Village: Sirbo, Tehsil-Garautha, District- Jhansi, State-UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023Ha. Proposed production is 20230 Cum Per Year.(From 1st Year to 5th Year). Brief Description of the project is described below.

Table 1.1 Salient Feature of the project

S. No.	Parameters	Description
1.	Name of the Project	Building Stone (Khanda,Gitti,Boulder) Mine
2.	Location of the Project	Village:Khairo, Tehsil-Garautha, District- Jhansi, State-UttarPradesh
3.	Project Proponent	Shri Sushil Kumar Gupta S/o Shri GadenLal Gupta
4.	Lease period validity	20 Years
5.	Lease Details	This is fresh grant case of mining lease and state Govt. has given is concern to grant mining lease of 20 years.
6.	**Location of the Project**	
	Village	Sirbo
	Tehsil	Garautha
	District	Jhansi
	State	UttarPradesh
7.	Total Lease Area	2.023Ha
8.	Category of the Project	"B2"
9.	Capacity of the Project	20230 Cum/Year (1st Year to 5th Year)
10.	Topography	Waste Land
11.	Lease Area Coordinate	**Pillers / Latitude (N) / Longitude (E)** **A** — **25^0 34' 2.76" / 79^0 13' 18.91"** **B** — 25^0 34' 6.02" / 79^0 13' 15.45" **C** — **25^0 34'10.2 " / 79^0 13' 17.36"** **D** — 25^0 34'7.31" / 79^0 13' 21.50"
12.	Land Type	Waste Land
13.	Method of Mining	Opencast, Semi-mechanized Method
14.	Operational days/ Year	300 Days
15.	Total Water Requirement	5 KLD of water will be used for the project site (Drinking use, Sprinkling &Plantation)
16.	Source of Water	Potable tankers
17.	Man power requirement	23 persons

18.	Nearest railway Station/ Airport along with distance in Kms	Moth Railway Station, 33.35Km,NW **Airpor**t: Gwalior Airport, 127.85 km, NW
19.	Nearest Town, City, District Head Quarters along with distance in Kms	**Nearest District Headquarter** Jhansi, 66.90 km, SW
20.	Ecological sensitive areas (Wild life Sanctuaries, National Parks, Biosphere Reserves, etc.)	Not Available
21.	Historical Places	None
22.	Financial & Social benefit	This Project will provide employment to local people directly and indirectly, which will improve their socio-economic status.
23.	Proposed Project Cost	Rs. 62.99 Lakhs
24.	Proposed CER Cost	Rs. 3.647 Lakhs
25.	EMP Expenditure	Rs. 9.57 Lakhs

2.0 INTRODUCTION OF THE PROJECT/ PROJECT BACKGROUND

2.1 INTRODUCTION OF THE PROJECT

Name of project	**:**	BuildingStone(Khanda,Gitti,Boulder) Mine
Location of Project	**:**	Area- 2.023Ha Village-Sirvo, Tehsil- Garautha, District- Jhansi, State-UttarPradesh
Production	**:**	20230Cum/Year (From1st Year to 5th Year)
Total ML area	**:**	Area: 2.023Ha

Name and address of the project proponent:

M/s Sanjay Stone Gramodhyog
Sri Sanjay Kumar Gupta
s/O Sri Gendanlal Gupta
R/O: 49 Kailash Residency
Thana- Kotwali
Tehsil&District-Jhansi (u.p)

Brief description of the nature of project

The proposed Mining of Building Stone located at Village: Sirvo, Tehsil-Garautha, District- Jhansi, and State-UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023Ha. Proposed production is 20230 Cum Per Year.(From 1st Year to 5th Year).. The proposed method of mining will be opencast-Semi-mechanized method (category B2). This is fresh grant case of mining lease and state Govt. has given is concern to grant mining lease of 20 years.

2.2 Need of the project and its importance to the country and or region:

The economy of India is the eleventh largest in the world by nominal GDP and the third largest by purchasing power capacity. The primary reason for the economic growth can be attributed to the growth in infrastructure. Infrastructure growth is directly proportional to the availability of raw materials such as brick, stone, cement and sand etc. with the growing infrastructural requirement of the India, the demand of raw materials have increased geometrically. In Jhansi district of Uttar Pradesh, a number of stone mines are there. There is abundance of stone, buried in the area; it had become a major source of raw material used in infrastructure industry. The developments of mining in the area provide direct and indirect employment opportunities, infrastructure development, communication and development socio-economic infrastructure. The important benefits accruing from the project can thus be stated as - boost to local and regional economy, direct contribution to the state revenue.

2.3 Demand supply Gap:

Raw material for the infrastructure development is at high demand in the north-west U.P.

2.4 Import Possibility:

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

2.5 Export Possibility:

Export possibility is neither conceivable nor there is any such demand. Import does not apply in the present case as Building Stone (Khanda,Gitti,Boulder) is indigenously available at a number of mines under operation in District Jhansi of State Uttar Pradest & other States of India.

2.5 Domestic/ Export Markets

Domestic Market

The proposed mining activity is for obtaining Building Stone (Khanda,Gitti,Boulder) for indigenous consumption and also for sale to nearby areas to utilized in infrastructure industries.

2.7 Employment Generation (Direct and indirect) Due to project:

The total Manpower is 23 required for the mining site. There will be 23 persons employed form nearby villages. Unskilled operators and labors required for the mines will be recruited from neighboring village while some technically Qualified personnel will be hired from outside.

S. No.	Particulars	Nos. Required
1.	Mine Manager/Mine Engineer (Full Time)	1
2.	Mine Mate/Blaster	1
3.	Skilled workers	9
4	Semi Skilled	4
5.	Unskilled workers	8
Total		**23**

The maximum production envisaged is 20230 Cum or 52598 Tonnes(assuming Bulk density 2.6) which shall be achieved every year From1st Year to 5th year which implies that 210 tonnes of production per day considering 300working days in a calendar year.

3. Project description:

The proposed project is mining unit of Building Stone (Khanda,Gitti,Boulder)in the area of 2.023Ha situated at Village: Sirbo, Tehsil- Garautha, District-Jhansi, State- Uttar Pradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023Ha. Proposed production is 20230Cum/52598 tonnes per Year(From1st Year to 5th Year).

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

The project involves mining of Building Stone (Khanda,Gitti,Boulder). it is not interlinked with any existing project.

3.2 Location of Project:

The area lies in Village:Sirbo, Tehsil- Garautha, District-Jhansi, State- UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023.Ha. & it lies 7.0Km SE of village Garautha. The site is nearly 66.90(SW) km away from Jhansi District Headquarter. The mining site is 3.77Km away from the Gursarai-Grautha, SH-42, Road. The location plan is shown below:

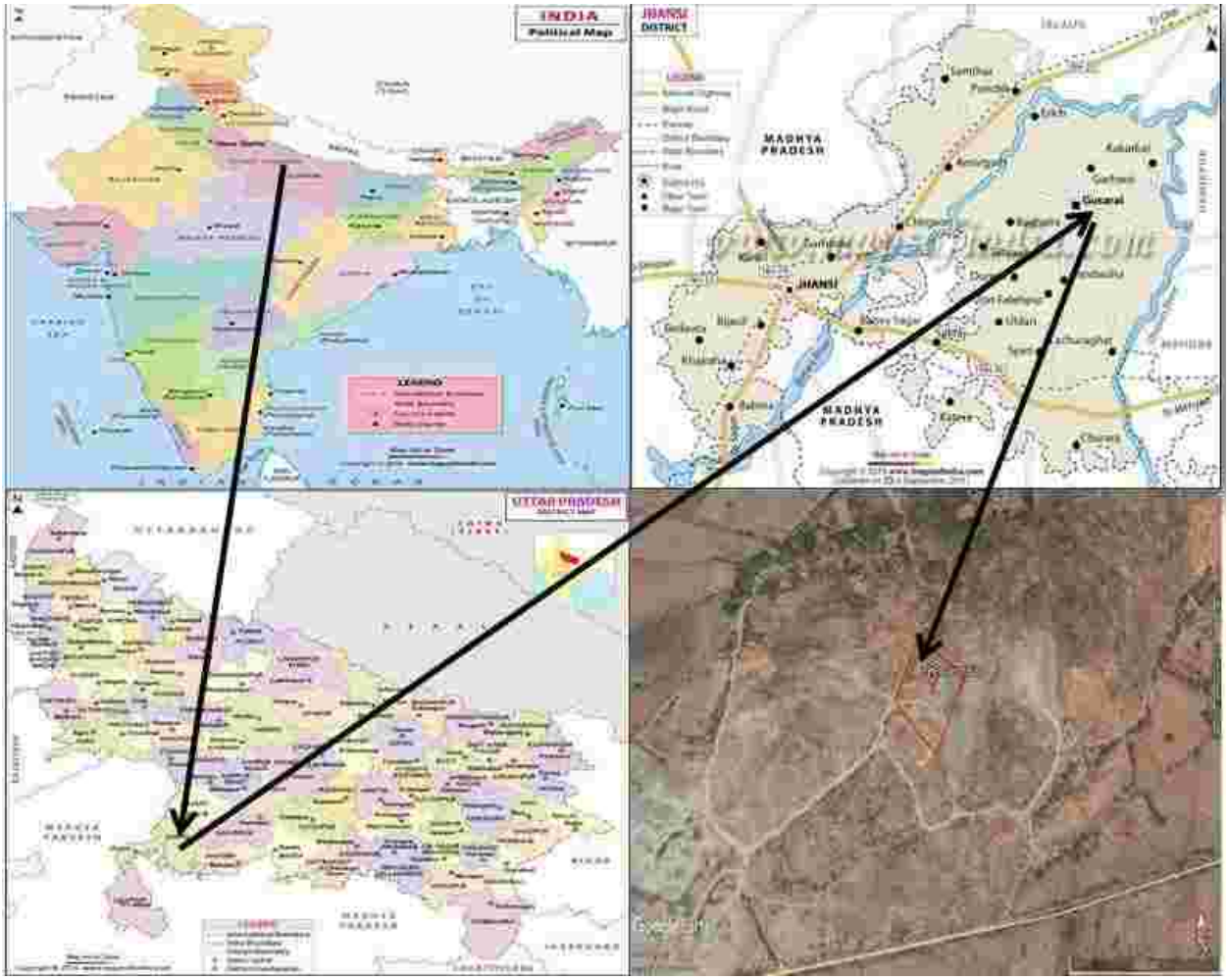

Figure 1: Location Plan

Figure 2: Google Earth showing Zoom View of the Project Site

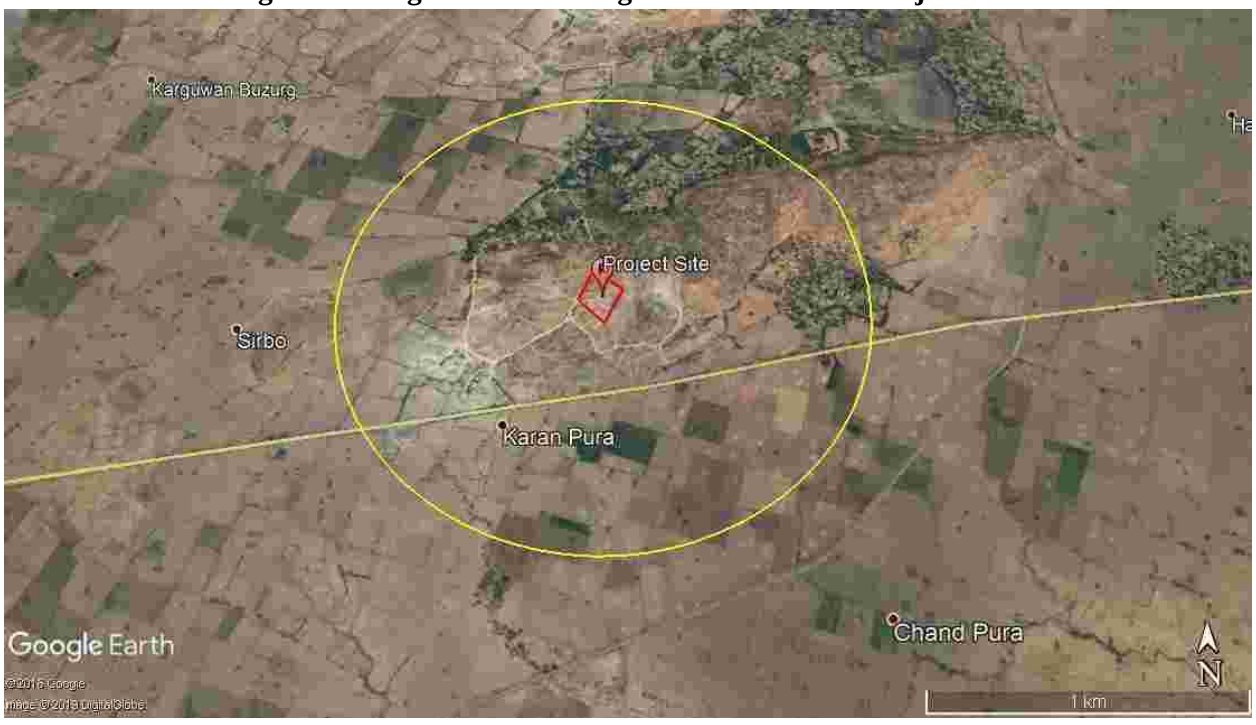

Figure: 3 Google Map Showing 1 km Radius of the Project

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

It is naturally occurring rocks which is site specific due to its geological origin. This lease is granted by the state govt. No alternative sites are proposed.

3.5 Method of mining:

(A) OPEN CAST MINING:

i) Existing Method of Mining:

It is fresh grant case of mining lease & mining operations yet to be commenced.

(ii) Proposed method of Mining:

It shall be opencast semi-mechanized mine. To meet production wagon drilling with deep hole blasting shall be carried out. The Blasted material will handle with JCB Backhoe Loader/ excavator & loaded into Dumpers. Mining shall be carried out from Top to Downward through formation of benches. The Height of benches shall be kept 6m, width 6m with face slope 70^0. Approach road having width 5m & gradient 1:16 shall be provided to join mining faces. No mining & allied activity like disposal of, sub grade mineral, mineral reject etc. shall be carried out with in 7.5m strip. The entire lease area is devoid of soil cover or waste material. Therefore no proposal of separate stacking of top soil has been envisaged. Lessee shall obtained necessary permission from the office of chief explosive controller for blasting.

The year wise quantities of Building Stone (Khanda,Gitti,Boulder) to be generated from pit is as below-

Years	**Exploitation of Building Stone (Khanda,Gitti,Boulder) (Cum)**
1st	20230
2nd	20230
3rd	20230
4th	20230
5th	20230
Total	**101150**

The year wise production schedule, quantities of waste to be generated from different benches in pit is given below-

1st Year:

Bench level (mRL)	Face Length (m)	Face Advancement (m)	Height (m)	Width (m)	Volume (cum)
216-210	45	48	6	6	12960
210-204	54	22.44	6	6	7270
Total					**20230**

2nd Year:

Bench level (mRL)	Face Length (m)	Face Advancement (m)	Height (m)	Width (m)	Volume (cum)
210-204	54	49.56	6	6	16058
204-198	121	5.747	6	6	4172
Total					**20230**

3rd Year:

:Bench level (mRL)	Face Length (m)	Face Advancement (m)	Height (m)	Width (m)	Volume (cum)
204-198	121	27.865	6	6	20230
Total					**20230**

4th Year:

:Bench level (mRL)	Face Length (m)	Face Advancement (m)	Height (m)	Width (m)	Volume (cum)
204-198	121	27.865	6	6	20230
Total					**20230**

5th Year:

:Bench level (mRL)	Face Length (m)	Face Advancement (m)	Height (m)	Width (m)	Volume (cum)
204-198	121	27.865	6	6	20230
Total					**20230**

Plan & Sections:

The individual Development Plan at the end of Plan period & Section showing pit layout, etc.

DRILLING & BLASTING:

It will be open cast, semi-mechanized mine. Building stone (granite) is hard rock, its hardness has been considered as 6-7 on moh's hardness scale. To meet required production wagon drilling with deep hole blasting shall be carried out. Secondary blasting with Jackhammer Drilling Shall be carried out if required

MINE DRAINAGE

Minimum and maximum depth of water table based on observations from nearby wells and water Bodies.

One Dug well is situated near the applied area. The Top level of the well is 180mRL &water table encountered in well is about 30m deep and the expected depth of water table in the region is about 150mRL. During summer the water table further goes down about 3.0m. And depth of water table will be about 147mRl. In winter, the water table goes down about 2.0m. And expected depth of water level is about 145 mRL. During Rainy Season the water level further rises about 2.0m and depth of water level is about 152.0mRL.

b) Indicate maximum and minimum depth of Workings.

During Frist five years, the proposed bottom level of working pit will be confined up to 198.0 mRL & water table will not be intersected by mining operations. No seasonal or perennial drainage exists within the proposed side of mine working, therefore chances to encounter the water within the working pit shall be nil during plan period.

c) Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged:

Mine working in pit will not go beyond up to 198mRL, & depth of pit during next five years shall be 12m, thus there is no chance to encounter the water table.

d) Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

No Seasonal drainage exists within the applied area therefore no chances to encounter the water within the working pit shall be least during first five years.

Disposal of Waste:

The entire area consist of Granite outcrop & further persist in depth .All the Extracted quantity of Gitti, Khanda,boulder, to be exploited shall be sent to crusher plant outside the area. Therefore generation of waste shall be nil& no proposal has been envisaged for its separate dumping.

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3.6 Resource Optimization/ Recycling and Reuse

Water will be accumulated in the excavated mine out pit area during rains and pits serve as a natural ground water recharging structure. As a result of extraction of mineral, the rate of charging of ground water is likely to be increased considerably.

3.7 Availability of Water Its Source, Energy/ Power Requirement and Source:

3.7.1Availability of water, its source

Total water requirement in the mine will be about 5 KLD for drinking & domestic use, dust suppression and plantation. Drinking water and water for dust suppression and plantation will be collected from nearby villages. Besides above, rain water will be collected in the working pit which will be used for dust suppression and plantation purpose. A small water tank is also proposed to be constructed in the office premises. This can be used for supply of water for mining work, spraying, watering the plants and drinking purpose.

Water requirement

The total water required, diesel and explosive is approximately 5 KLD the break up with its uses is given below:

	Purpose	**Detail**	**Avg. Demand/Day**
Portable Tanker	Drinking@13 lpcd/worker	23 workers x 15 lpcd = 345 lpcd	0.345 KLD
	Mine operation/others	-	2.0 KLD
	Land reclamation / plantation @5 Lit/Tree	50Trees x 5 lpcd = 250 lpcd	0.250KLD
	Dust suppression @4Lit/Sq.m (Twice in a day)	Haul Road Area = (100 m Length x 6m Width = 600 m^2) x lpcd/Sq.m = 2400 lpcd	2.4 KLD
Total			**5 KLD**

3.7.2 POWER

The operation will be done during day light; hence there is no power requirement for theproject at site.

3.8Quantity of waste to be generated (liquid or solid) and scheme for their management / disposal.

No solid waste generation is expected from the mining procedure. 23 persons including the works man and the administrative staff are supposed to produce negligible waste like gutka pouches, smoking litter, and newspapers etc. belonging to biodegradable category waste.

3.8.1 Solid Waste Generation & its Disposal

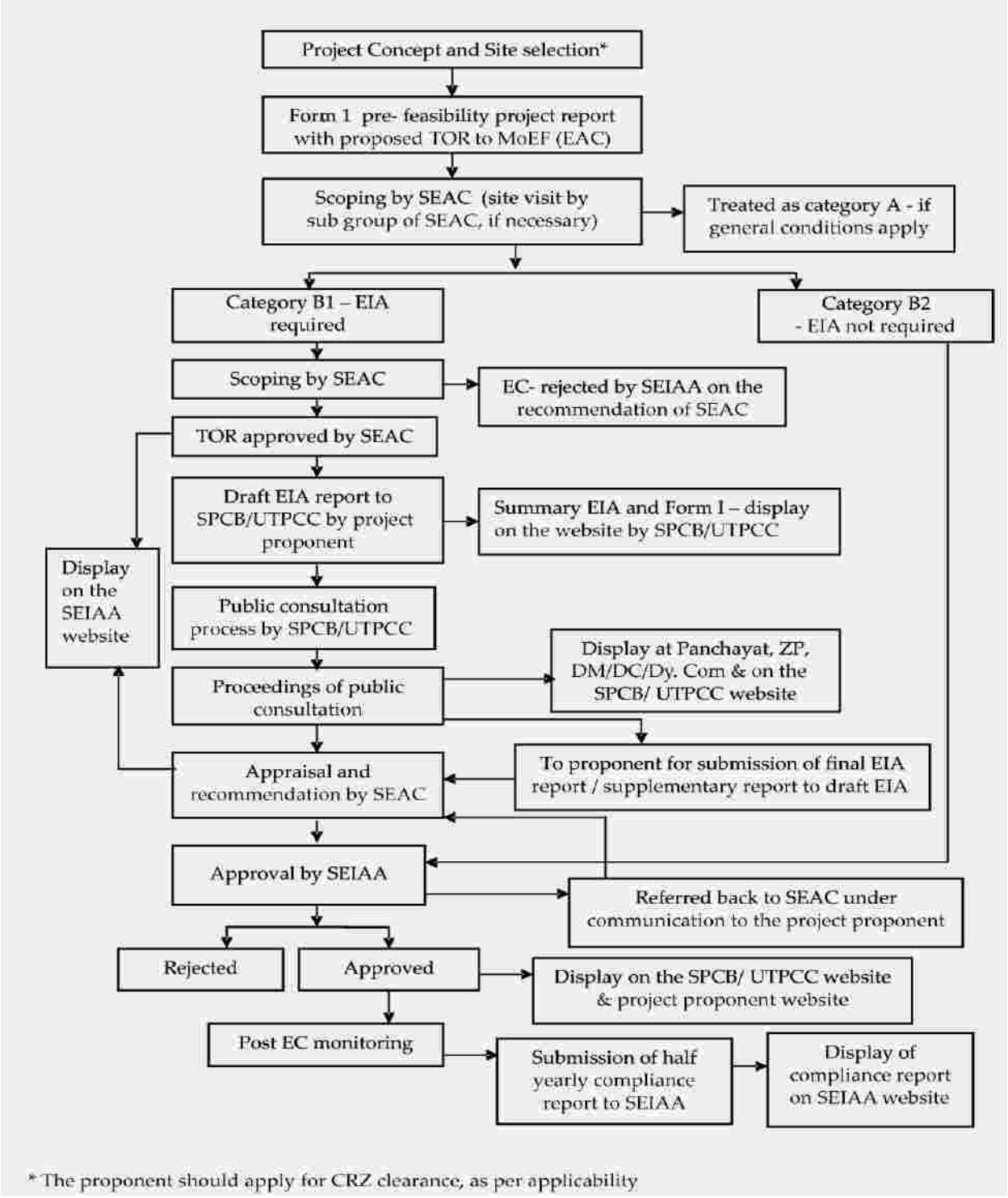
Waste generated will be collected on regular basis and will be disposed as per the Municipal Solid Waste Management (Management & Handling) Rule 2000 and its subsequent amendments.

3.8.2 Generation of Liquid Effluent

There is no waste water generation during the process.

3.9Schematic representations of the feasibility drawing which give information of EIA purpose:

As per the Environment Impact Assessment (EIA) notification dated 14th Sept. 2006 and subsequent amendments, the proposal falls under Category "B". Form-1, PFR & EMP report shall be required to get the environmental Clearance for this project from the SEIAA. The EC process is shown in- Fig



4.0 SiteAnalysis:

4.1 Connectivity:

The area lies in Village:Sirbo, Tehsil- Garautha, District-Jhansi, State- UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023.Ha. & it lies 7.0Km SE of village Garautha. The site is nearly 66.90(SW) km away from Jhansi District Headquarter. The mining site is 3.77Km away from the Gursarai-Grautha, SH-42, Road

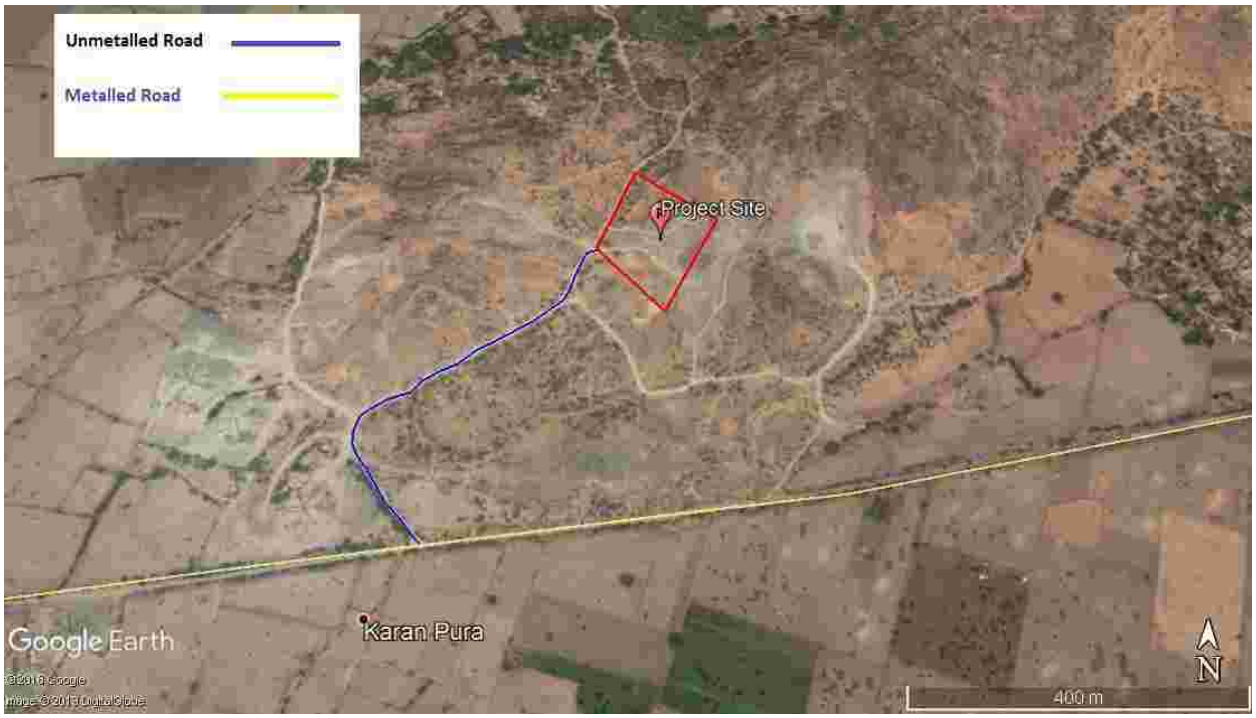


Figure 4: Connectivity Details from Project Site

4.2Land form, land use and land ownership

Mining is proposed in Govt. Owned Waste land and state Govt. has given is consent to grant mining lease of 20 years. in their respective land

4.3 Topography Along With Maps:

The applied area is dominated by granite outcrop of Bundelkhand Granite Complex. The General slope of lease area is from South east to North West direction. No seasonal perennial drainage exists within the lease area. Due to past mining the lease is degrades by mining pit &depth of pit varies 2m to 11m.The highest level is 217mRLtoward South east direction while lowest level is 191.0mRL toward North west direction

Source: Approved Mining Plan

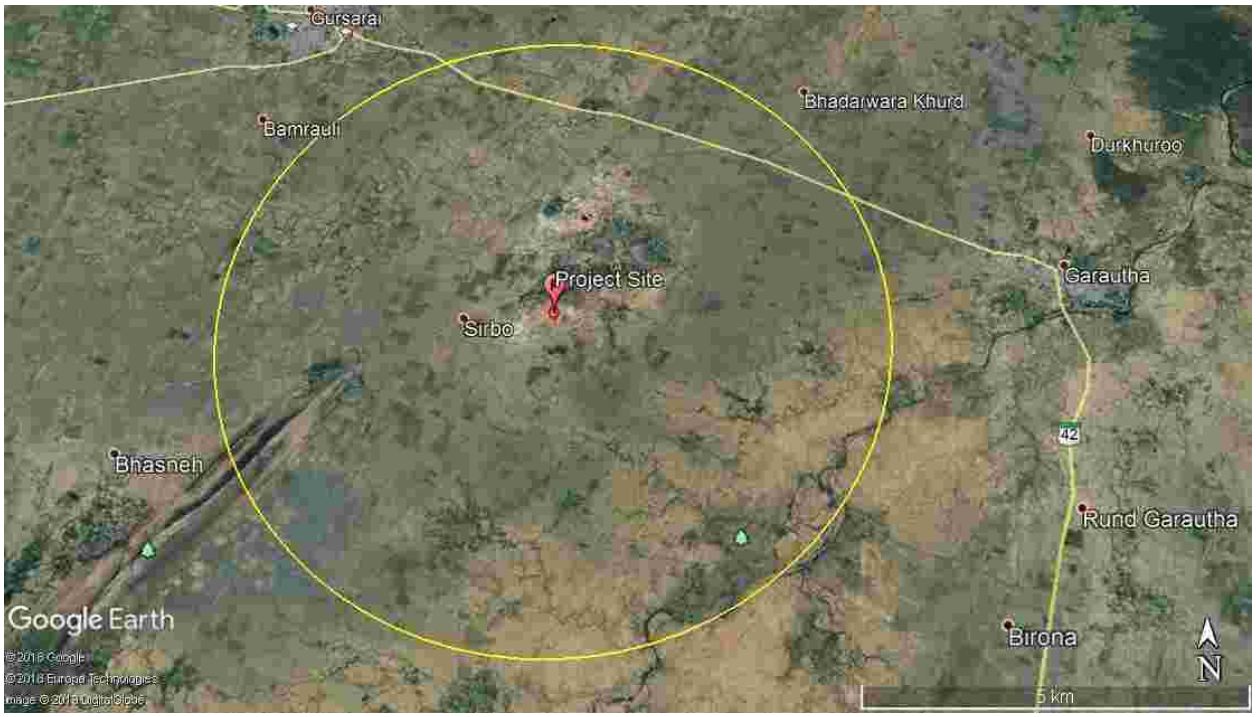


Figure 5: Google Map showing 5.0 km radius of Buffer Zone

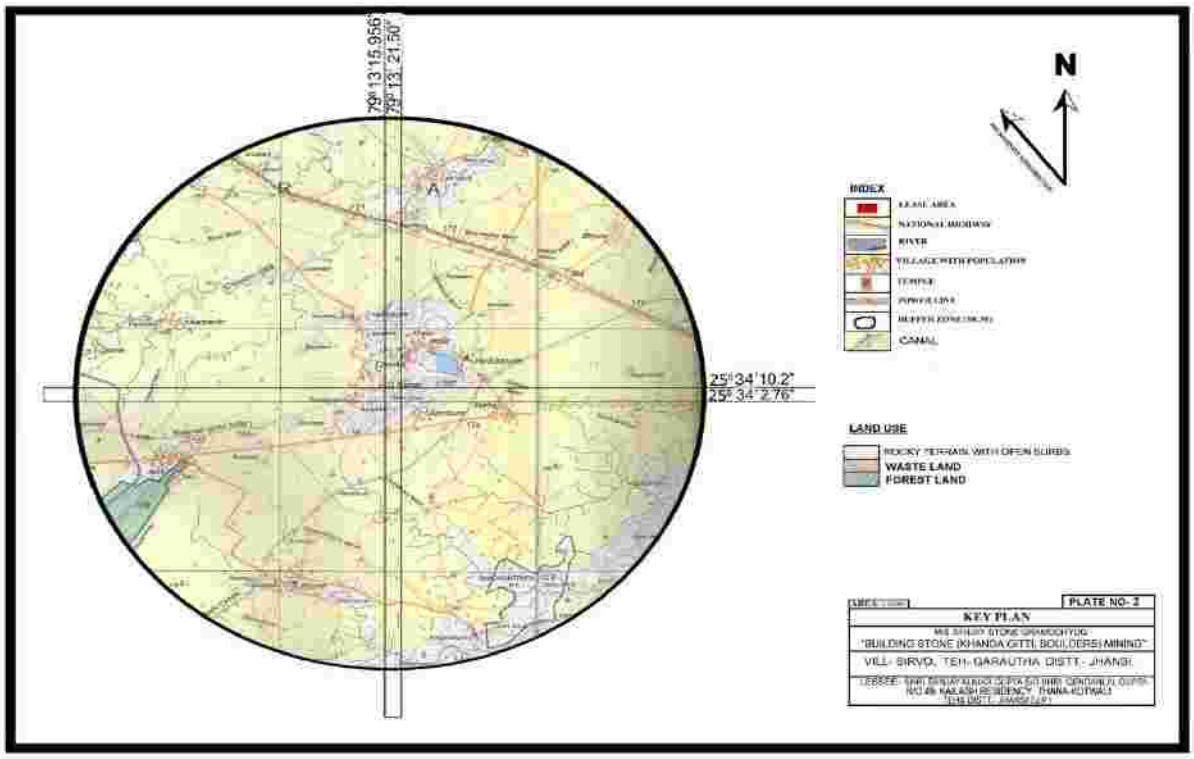


Figure 6: Topographical Map 5.0 km radius of Buffer Zone

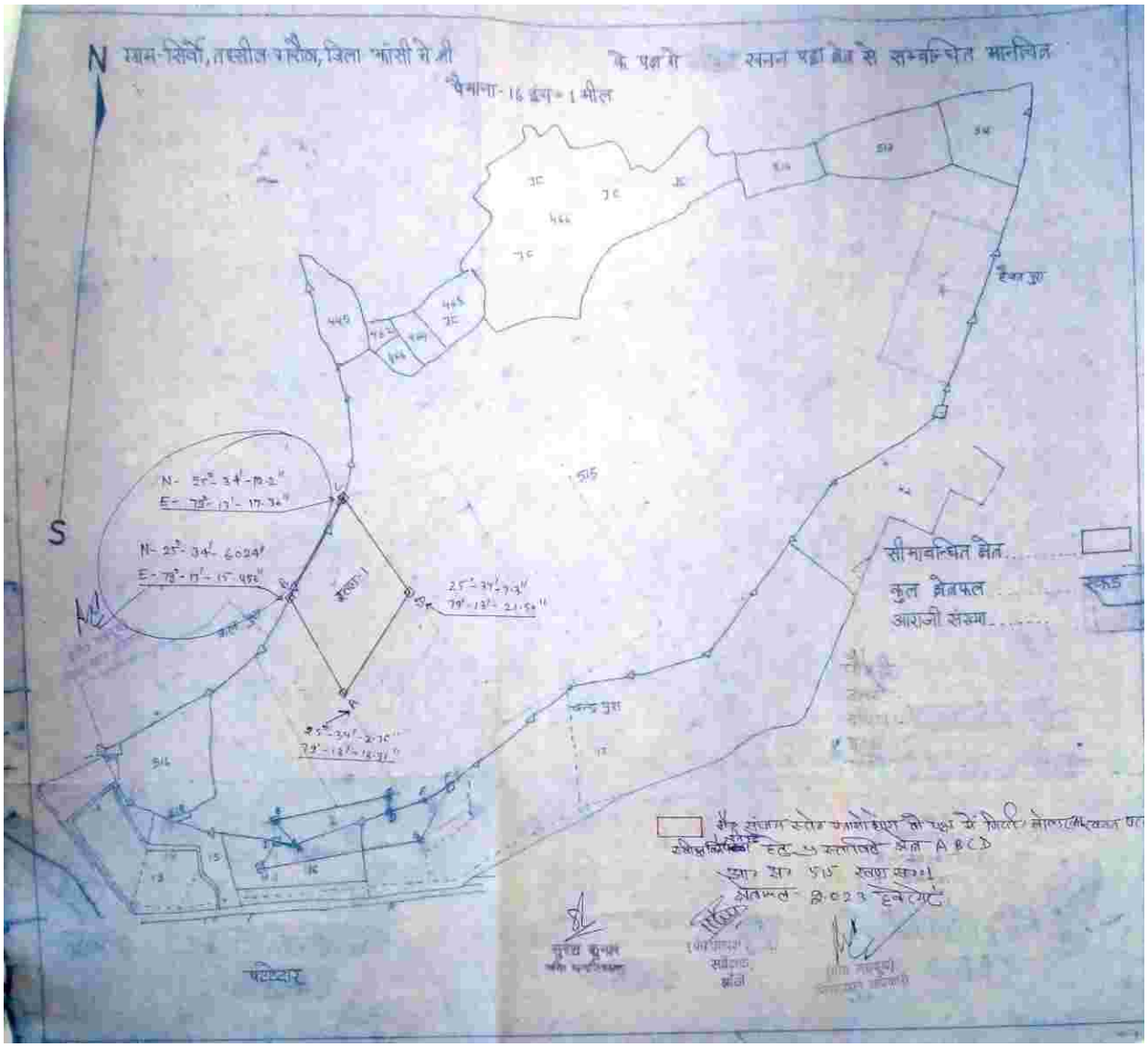


Figure 7: Khasra Map (Site Plan)

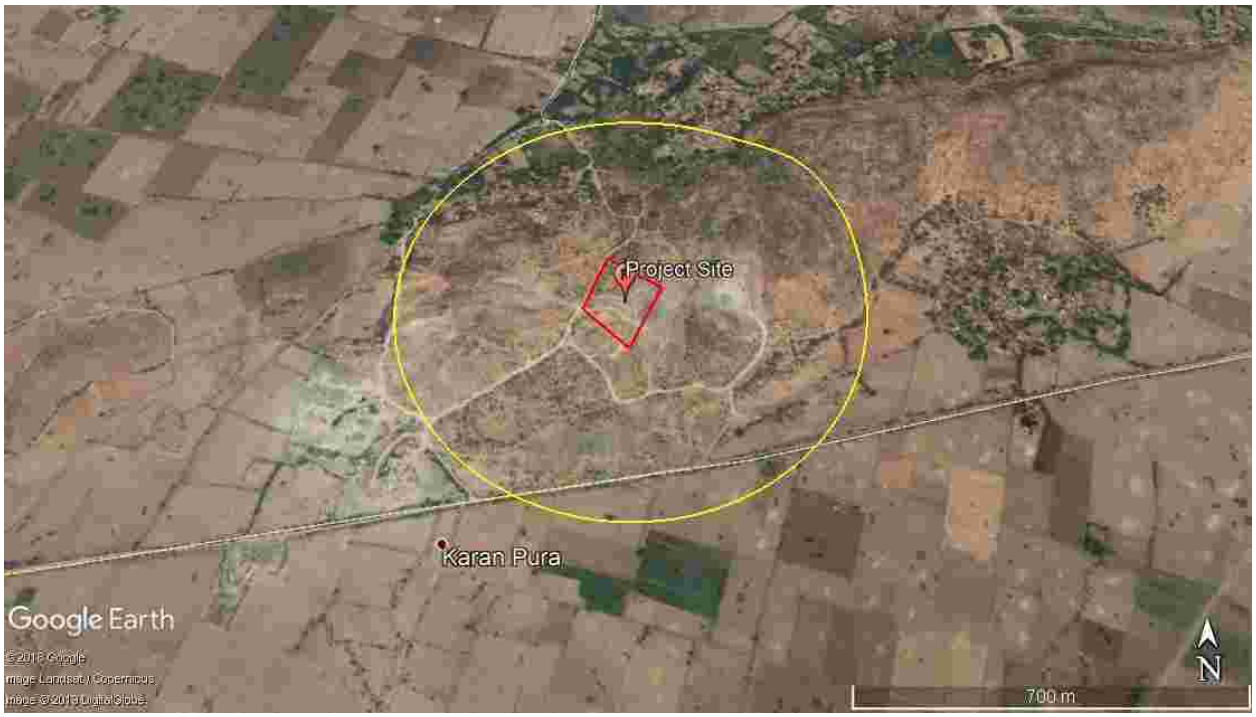


Figure 8: Google Map Showing 500 m Radius of the Project

4.4 Existing Land Use Pattern {Agriculture, Non-Agriculture, Forest, Water Bodies (Including Area Under CRZ)}, Shortest Distances From The Periphery Of The Project To Periphery Of The Forests, National Park, Wild Life Sanctuary, Eco Sensitive Areas, Water Bodies (Distance From The HFL Of The River), CRZ. In Case Of Notified Industrial Area, A Copy Of The Gazette Notification.

Table: Environmental Settings:

S.N.	Particulars	Details	
1.	Nearest Villages	**Village**	**Distance & Direction**
		Amali ,	- 3 Km, SW
		Habupura	-2.15 Km, NE
		Karanpura	-0.5 km, SW
2.	Nearest city/ town	Nearest Town; Gursarai,5.50Km (NW)/District: Jhansi, 66.90 km, SW	
3.	Nearest Railway Station	Moth Railway Station, 33.35Km,NW	
4.	Nearest Metalled Road	Gursarai -Garautha ,SH-42 Road,3.74 Km,NE ,PWD Road:165 m,(S)	
5.	Nearest State Highway/National Highway	SH-42 Road, 3.74 Km,NE NH-25 Road, 33.84 Km, NW	
6.	Nearest Airport	Gwalior Airport, 127.85 km, NW	
7.	Archaeological Important Place	None, within 10 km radius area of mine site.	

8.	Ecological Sensitive Areas (National Park, Wildlife Sanctuary, Biosphere Reserve etc.)	No Eco sensitive areas within 10 km buffer zone.
9.	Reserved/Protected Forest/Notified Areas within 10 km radius	None, within 10 km radius area of mine site.
10.	Nearest River / water body	None
11.	Seismic Zone	Seismic Zone-II (low damage risk zone). *Source:* *https://moes.gov.in/writereaddata/files/LS_US_1780_26072017.pdf*

4.5Existing infrastructure:

4.5.1Roads:

The area lies in Village:Sirbo, Tehsil- Garautha, District-Jhansi, State- UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023.Ha. & it lies 7.0Km SE of village Garautha. The site is nearly 66.90(SW) km away from Jhansi District Headquarter. The mining site is 3.77Km away from the Gursarai-Grautha, SH-42, Road

4.5.2 Water Supply:

They use the well water/bore well both for agriculture and household purpose. The average water table in this region ranges at 30-35m. below the ground level. The mining staff/workers use water from bore well to be dug near the leasehold and from the water tanker.

4.5.3 Electrification:

The Village Sirbo has electricity connection while lease area is not connected with electricity. Surrounding 5 km village are electrified from the lease area.

4.5.4 Educational – Facilities:

The Village badagaon, bijaura ,Gursari has a primary school, also secondary, Higher Secondary College educations are in garautha Gursarai jhansi

4.5.5Health Service:

The Village hospital situated in Birpura and Govt. hospital, Bijaura

4.5.6 Postal – Facilities:

The post office is on Erich & it is about 26.20 km in North-East direction away from lease area.

4.5.7Transport:

The applied area is approachable to Gursarai-Garautha State Highway (SH-42).

4.6 Soil Classification:

The entire are is rocky terrain having poorly weathered rock fragment on upper most earth surface and soil cover is nil.

Source: Approved Mine Plan

4.7 Climatic data from secondary sources:

Jhansi District lies in the southwestern part of Uttar Pradesh state. The district is part of Southern Bundelkhand plateau having general slopes in north-easterly direction. Total annual rainfall is received during SW monsoon and ranges from 700 to 1100 mm. The high intensity of rainfall causes moderate to severe erosion resulting in removal of nutrient rich soil and increases sedimentation in rivers and reservoirs. The rainfall pattern is highly erratic resulting in recurring droughts. The climate is sub-humid and it is characterized by a hot dry summer and cold winter the average annual normal rainfall is 885 mm. About 91% of rainfall takes place for June to September (Monsoon Season)

Source: http://cgwb.gov.in/AQM/NAQUIM_REPORT/UP/Jhansi.pdf

Humidity:

The mean monthly relative humidity is 41%. In summer season air is very dry and during the monsoon season the moisture content of air is high.

Source: http://cgwb.gov.in/AQM/NAQUIM_REPORT/UP/Jhansi.pdf

Rainfall:

The average annual normal rainfall is 885 mm. About 91% of rainfall takes place for June to September (Monsoon Season)and the lowest rain fall was received during the month of November –December.

Source: Approved Mine Plan and: http://cgwb.gov.in/AQM/NAQUIM_REPORT/UP/Jhansi.pdf

5.0: Social Infrastructure

- Health & educational facilities (in the form of primary and secondary schools) are available in the nearest villages.
- Medical facilities, Primary Health Centre are there in the area.
- Village people are availing drinking water facilities generally from the hand pump, open well and tube well. The water supply is also supplied through tanker in few villages.
- Communication services like post office and telephones are available in the nearby village. Some of the villagers are having mobile phones.

5.0 Planning Brief:

5.1 Planning Concept:

The impact on land form or physiography will be land use on the hilly terrain will undergo radical changes due to the open cast mining.

During the next five years mining, 2.023ha. land will be degraded due to mining & allied activities. The breakup of the land to be affected during next five years and end of conceptual period of due to mining operation is given below:

Activities	**End of 5 years (Ha.)**	**Area occupied (Ha) End of conceptual period**
Mining Pits	1.485	1.62
Interburden dumps	Nil	Nil
Soil stack	Nil	Nil
Road	Nil	Nil
Infrastructure facilities	Nil	Nil
Afforaststion	Nil	Nil
Balance undisturbed agricultural land	0.538	0.403
Total	**2.023**	**2.023**

5.2 Population Projection:

The project will employ most of the workers from nearby villages. Only supervisory staff will be hired from outside. There will not be any increase in population due to the project. However, few people from other areas may migrate in this area for business opportunities.

5.3 Land use planning (breakup along with green belt etc.)

Impact Assessment:

Land area indicating the area likely to be degraded due to quarrying, roads, workshop, processing plant,etc.

The impact on land form or physiography will be land use on the hilly terrain will undergo radical changes due to the open cast mining.

5.5Assessment of Infrastructure Demand (Physical & Social)

Temporary office and stores will be provided in the mining area. Specified first-aid box with all necessary facilities will be maintained at the site office. Communication services like post office and telephones are available in the nearby village. Some of the villagers are having mobile phones.

5.6 Amenities/Facilities:

Additional facilities will be made as per the requirement. Arrangements for safe and healthy working conditions. Provision of Drinking water from nearby villages or through tankers in dry period.

5.7Transport of Men and Material:

Workers from nearby villages will be engaged for mining and transportation purposes. They will come for work on foot. The material from the mine will be transported by trucks / dumpers.

6.0 Proposed Infrastructure

6.1 Industrial Area (Processing Area)

No infrastructure is proposed.

6.2 Residential Area (Non Processing Area)

As local workers from nearby areas will be engaged for the mining activity, no residential area/ housing are proposed.

6.3Green Belt/Afforestation:

The lease area is stony terrain so it is not feasible to undertake the plantation with in lease hold. The plantation will be undertaken outside the lease area, around the crusher plant and along the road. Only strong healthy nursery raised plants should be used to ensure success. The saplings should be dug out from the nursery with sufficient earth around the roots. The earth should be filed with grass. Plants raised in the polythene container are best. Transport to the site should be done in baskets to avoid damage of the roots. Damaged plants should be sorted out.

About 10 gm of insecticide, B.H.C. 10 percent, should be sprinkled on the sides and base of the pit to prevent damage by insect larvae. Another 10 gm of insecticide should be mixed with the soil before refilling.

Trees: Ficus religosa(papal), Shorea robusta(sal), Magnifera indica (Aam), Emblica officinalis(Anwala)

6.4 Social Infrastructure:

Physical & Social Infrastructure is provided, and if necessary other facilities will also be provided by mine's proponent.

This Project is providing employment to local people directly and indirectly. Indirect employers are shopkeepers, mechanic, drivers, transporters etc. The lessee will be responsible for providing better social infrastructure benefits such as drinking water, health care measures, educational facilities, in surrounding areas.

The education level of the area is very low and most of the people are illiterate. As in the Building stone (Khanda,Gitti,Boulder)mining, skilled and unskilled labors are required in good number for manual breaking and sorting work. Therefore, Soapstone mines give ample opportunity for employment of local people; thereby their earning will improve due to continuous employment in the mine with better wage rate. Their increase of earning will definitely help in improving the education, health and living standard of the villagers.

6.5 Connectivity:

The area lies in Village:Sirbo, Tehsil- Garautha, District-Jhansi, State- UttarPradesh. The Building Stone (Khanda,Gitti,Boulder) mine lease area is 2.023.Ha. & it lies 7.0Km SE of village Garautha. The site is nearly 66.90(SW) km away from Jhansi District Headquarter. The mining site is 3.77Km away from the Gursarai-Grautha, SH-42, Road

6.6 Drinking Water Management (Source & Supply of Water):

The main drinking water requirement will be for mine workers. The strength of workers will be 23. It can be seen that drinking water requirement will be 5 KLD. The drinking water is provided through Hand-pump, bore well and through water tankers.

6.7 Sewerage System: Mobile Toilets will be provided for mine workers.

6.8 Industrial Waste Management: Not Applicable

6.9 Power Requirement & Supply/ Source:

The operation will be done only during the day light; hence there is no power requirement for the project at site.

7.0 Rehabilitation and resettlement (R &R) Plan

The mining lease which is almost wasteland. There will be no rehabilitation and resettlement involved with the project.

8. Project Schedule & Cost Estimates:

Likely date of start of construction and likely date of completion:

Proposed project will be started after getting Environment Clearance and progressive closure plan will be submitted in due course of time.

Project Cost along with analysis in terms of Economic Viability of the Project:

The project cost is about Rs.63.9 Lakhs as all the equipments will be required for Mining & hence, will be taken on rent. There is built in profit margin, therefore, proposed project will be economically viable.

S. No.	Description	Unit	Total (Rs.)
A. Project Operation Cost			
1.	**Manpower Cost:** Mine Engineer (Full time) - 01 Mine mate -01 Skilled: -09 Semiskilled -04 Un skilled: Laborers charge -08	(Total Man power 23) Assuming 300days Rs. 25,000/ month= 3,00,000 Rs. 20000/ month= 2,40,000 Rs. 650/ day= 1,95,000 x9=17,55,000 Rs. 500/ day= 1,50,000 x4=6,00,000 Rs.400 / day= 1,20,000x8=9,60,000	3855000
2.	**Expenditure on Occupational Health:** PPE & First Aid Facility Medical checkup and Medicine (Once in a month)	3000/worker (3000 x 23)= 69,000 *Doctor's visit*: 10,000/ month (10working months) =100,000 *Medicines* (Assuming 500/worker) 500 x 23 = 11,500 (Mine operation Month: 10) = 115000	2,84,000
3.	**Equipment's/Tools/Machineries**	300 days Assuming Rs.5000/day	1500000
4.	**Drinking and Sanitary Facilities**	➢ Rs. 2000/day for drinking/domestic (300 days) ➢ Rs. 30,000/ Bio-toilets x 2	6,00,000 60000
	Total Project Operation Cost (A)		**Rs. 62,99,000 (62.99**

			Lakhs)
B. Break-up of Expenditure on Environment Protection & Environment Management			
5.	Haulage Road Repair & Maintenance • Filling, Leveling and widening of the road up to width of 6m and length of 100 m. • Setting & Fixing of Cut Stone on the leveled road.	Annual 100 m (L) x 6 m (W)	1,00,000
6.	Water Sprinkling on Haulage Road for Dust Suppression	Assuming Rs.1000/day for 300 days of working Tanker Cost: Rs. 1000/Tanker Tanker Capacity: 5000 liter, No. of Tankers required: 1	3,00,000
7.	Plantation along the road side & post plantation care	Plantation@450/sapling (10 sapling/Year) Post plantation care @250/day (For 10 Saplings Annually.i.e.365 days). ***Note: Annual cost will increase with increase in no. of sapling.***	95750
8.	Environmental Monitoring & Compliances.	➢ **Half Yearly Monitoring of Environmental Parameters viz. Air, water, Noise & Soil.** ➢ Half Yearly Submission of Compliances.	5,00,000
	Total Environment Protection & Management Cost (B)		**Rs. 9,95,750 (9.957 Lakhs)**
	Total Project Cost (A+B)		**Rs. 62.99 + 9.957 (72.947 Lakhs)**

Corporate Environment Responsibility:

CER (Corporate Environment Responsibility) details for the Project

CER plan is given below:

- Total Cost of the Project = Rs.72.947 Lakhs
- Yearly CER cost for the project, i.e. 5% of the total project cost

Rs. 58.71 Lakhs x 0.05 = Rs. 364735 (3.647Lakhs)

This is the Proposed CER Plan, Activities will be Finalized as per the Actual need of the area (ON THE BASIS OF NEED BASE ASSESSMENT SURVEY)		
S.N.	**Particulars**	**Activity**
1.	Drinking water supply	Provide drinking water facility in surrounding villages and

		schools by hand pump installation.
2.	Health	Free distribution of medicines, health check-up camps nearby village
3.	Electrification including solar power	Solar lamp distribution& Solar street light installation
4.	Sanitation	Constructed the Toilets facilities for women nearby village
5.	Education	Distribution of school bags & Books in nearby Primary Schools

9.0Analysis of proposal (Final Recommendations)

- There will be direct and indirect employment at the first instance. The employment will be given to locals.
- Further, the share of indirect employment like increased purchasing power, dhabas and retail shops etc. is largely shared by local residents.
- The most important aspect of the project is the land under mining is almost agricultural land and not providing any income to the owner, implying that there will be no significant impact on the livelihood of residents.
- Finally, all aggregate will be used in construction of road, which otherwise is a contribution towards building nation.

9.1Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area

No tribal population is residing in the study area. There will be social benefits from the mining operations.

10.0 CONCLUSION

It is predicted that socio-economic impact due to this project will positively increase the chance of more employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The revenue of the State Govt. will be definitely increasing due to the proposed activity. The entire project area is devoid of any endangered flora and fauna. **It is proposed to reclaim the land and develop green cover for eco-restoration with native species to a maximum possible extent.** Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.