Pre-Feasibility Report

Summary

Name of Stone Quarry	Boregaon (Jungli) Stone Quarry
Area (In Ha.)	3.80 Ha.
Khasra No	128
Village	Boregaon (Jungli)
Tehsil	Saoner
District	Nagpur
State	M.S.

Name of Lessee	M/S H.G. Infra Engineering Ltd.
Address	Friends Colony, Katol Road, Nagpur, District - Nagpur, Maharashtra.
Tehsil	Nagpur
District	Nagpur
State	M.S.

1.	Geographical co-ordinates	**Corner**	**Latitude**	**Longitude**
		BP1	N 21^0 26’ 39.10”	E 78^0 47’ 46.18”
		BP2	N 21^0 26’ 30.80”	E 78^0 47’ 45.00”
		BP3	N 21^0 26’ 30.99”	E 78^0 47’ 50.73”
		BP4	N 21^0 26’ 39.10”	E 78^0 47’ 50.43”
		BP5	N 21^0 26’ 39.93”	E 78^0 47’ 48.78”
		BP6	N 21^0 26’ 39.40”	E 78^0 47’ 47.85”
2.	Name of rivers/nallas/tanks/spring/lakes etc.	Umri Dam is situated at a distance of 100 meter in east of the area. Canal is situated at a distance of 3.50 km in SSE direction. Kolar Dam is situated at a distance of 3.50 km in SSE direction.		
3.	Name of Reserve Forest (s), Wild life Sanctuary /	None within 5km/10 km radius.		

	National parks etc.	
4.	Topography of Mining area	The Stone (Basalt) area is flat while surrounding is gently undulating
5.	Name of Mineral mined	Stone (Basalt)
6.	Size or magnitude of operation	This is a stone mine having area of 3.80 Ha. for the maximum production of stone @ 1,05,000 Brass for the year 2019-20.
7.	Period for Mining lease granted	06.10.2018 to 05.09.2023
8.	Drilling/Blasting	The drilling and Blasting will be by the Jack Hammer drills on the 5m x 5m benches for blast holes and will be blasted after charging with explosive. This operation will be attended by Contractor. Blasting and drilling will be done and labors are proposed in the handling of stone.
9.	Mining Method	Mining would be carried out by Semi-mechanized open cast method. Machineries are proposed in the working.
10.	Toposheet No.	55 K, 0, and P
11.	Manpower Requirement	1 Skilled 14 Unskilled (Labour) **Total = 15**

(i) Brief description & nature of the project

This Mine located in Boregaon (Jungli) Village , Khasra No. 128, Tehsil Saoner, District Nagpur, Maharashtra over an area of 3.80 Ha & falls under Category 'B2' project as per new mineral policy of Maharashtra. The mined out Limestone will be used for manufacturing of Lime and others/etc, Stone (Basalt) will also be used in construction and road material also as per demand.(e.g. as building blocks, in the groundwork, filling material). It is mostly used as manufacturing of lime. The mining will be done by Semi-

mechanized open cast method. It is proposed to produce 1,05,000 Brass stone from the mine by opencast method of mining.

(ii) Need for the project and its importance to the country and or region

The stone is abundantly available in the Proposed mine as well as surrounding area. A stone material serves as a back bone for Building and other infrastructure development. It has played a great role in development of civilization and industrialization. The occurrence of stone in the area is proved by the way of geological explorations and its production has important role in the local infrastructure development. The stone mine marginally benefits the local people by way of direct and indirect employment. State Government will also be benefitted by the project through royalty and Direct & Indirect Taxes.

(iii) Demand-Supply Gap

Stone is an essential constituent for infrastructural development projects like road, dams, bridges and building. It has high demand in Nagpur region due to increase in industrial and other infrastructural activities.

(iv) Imports vs Indigenous production

In the current Stone quarry business scenario, import of Stone is not envisaged. Maharashtra is one of the major producers of building stone in the country.

(v) Export Possibility

Not applicable.

(vi) Domestic / Export Markets

Domestic demand is one of the chief reasons for the rapid growth of Stone business in India. Thus, domestic market for stone as building material is well established.

(vii) Employment Generation (Direct and Indirect) due to the project

Unskilled local labours will be deployed and skilled labours will be deployed from local region.

1.0 PROJECT DESCRIPTION

(i) Type of Project (including interlinked and interdependent project, if any)

The project is exclusively for the quarrying of Stone (Basalt). No any interlinked project is included.

(ii) Type of explosive used/to be used

The Blasting will be done on contractual basis who have the explosive permit, so proposal for storage of explosive in magazine not required.

BLASTING PATTERN

Jack hammer drill hole	100 mm dia , Depth- 3.00 m
Spacing of hole	3. m
Burden	2.00 M
Drilling pattern	Staggared -Rows
Size of Cartridge	300mm
Quantity of Explosive	2.79kg per cartridge
Powder factor	7 tonnes /kg of explosive
Types of explosive	Slurry class II, Ammonia Nitrate with Diesel
Quantity of Explosive *I*day	329 Kg
No of holes	17 holes

(iii) Raw material/consumable required along with estimated quantity, likely source, marketing area of final product, mode of transport of raw material and finished products

No any raw material/consumables are required for Stone (Basalt) removal.

(iv) Quantity of wastes to be generated (liquid and Solid) and scheme for their management/disposal

No waste material will be generated hence waste disposal arrangements are not required.

(v) Selection of Dumping Site

No dumping site required.

(vi) Loading and Transport

The loading of ROM generated to the tipper/ dumpers will be done by loaders & material transported to the Lessee crusher to produce 10mm, 20mm, an 40mm size metal at plant. There will be Soil/weathered rock generated during mining period. The dumps may be on temporary basis in lease area, or may be used for backfilling the old pit.

(vii) Flora and Fauna

The trees observed in lease area are Neem, Babool, Sal, Palash and Gulmohor. The density of trees is poor in the region.

The rodents and reptiles exist in the area and there are no villages nearby surrounding lease area. Species of animals of no such specific importance is found in this region

2.0 SITE CONNECTIVITY

(i) Connectivity

Road: – The area is approachable by and all weather road up to National Highway 47 (Old NH-69) at a distance of 450 meter.

Police Station: – At Tehsil Saoner at about 15km from the mining site area.

Medical Facility: - Primary Health Centre at Borgaon and Umri village at a distance of 2 km from mining site.

School: - In Umri Village. (2 Km.)

Post office: - In Umri Village. (2 Km.).

Railway Station: - In Saoner (15 km).

(ii) Land Form and land ownership

The area specified for Stone (Basalt) quarrying is a Private individual land barren land, fall in Khasra no. 128 & covering an area of 3.80Ha. as shown in the map.

(iii) Climatic data form Secondary Sources

April and May are the hottest months in the area. The temperature rises up to 45.1 °C in the month of May. December and January are the coldest months with temperature falls down to as much as 10.6 °C. The average rainfall in the area is 1058 mm.

(iv) Social Infrastructure Available

There is well developed infrastructure to the Boregaon (Jungli) village, Primary schooling, Primary health center, etc. Higher Education facilities are available at Saoner City.

(v) Assessment of Infrastructure Demand (Physical & Social)

Since there will not be any major influx of people from outside, in this region because of the project, no adverse effect on physical and social infrastructure like roads, electricity, water supplies et are anticipated.

(vi) Industrial Area (Processing Area)

Not required.

(vii) Residential

There is no plan for development of residential area in the region.

(viii) Green Belt

Plantation would be carried out in 0.5835 ha in safety zone around 250 trees would be planted @ 125 trees per year.

(ix) Social Infrastructure

It is expected that the project will lead to much needed employment opportunities in the villages which will contribute to the socio-economic development of the area.

(x) Drinking Water Management (Source and Supply of Water)

The drinking water requirement for personnel working at the site will be met from the river itself or from the nearby village.

(xi) Solid Waste Management

The excavated Over Burden will be kept on the surface at earmarked places as per the DGMS guidelines & requirement. The OB would be utilized for the purpose of backfilling.

(xii) **Power Requirement & Supply / source**

The required quantity of electricity will be sourced from Maharashtra State Electricity Board (MSEB)/DG Set.

(xiii) Sewerage System

In view of the personals engaged in the project the system of sewerage will be developed for use on the bank of the river under the guidance from the Tehsildar and local administration.

(xiv) Industrial Waste Management

No industrial waste will be generated hence management not required.

ENVIRONMENT MANAGEMENT PLAN

(A) **Mined out Land:** - At present there is one pit. The details are given below.

Land use	**Area in Ha.**
Area under present pit	3.1643
Area under Dumps	Nil
Area under Mine Road	Nil
Area under Soil	NIL
Area under office etc.	Nil
Area under Plantation	Nil

Area under Ore storage/ Crusher	Nil

These features are shown in surface Plan Plate No – 5. There is no water problem except in rainy season, the rain water gets drained on slopes. There is no proposal of back filling reclamation, of any part of the pit.

(B) **Water quality Management**: -The necessary water requirement for drinking & for water sprinkling will be met from Dug well/Bore .well in the lease area, or from outside nearby Dug well. The water is potable. There are no chances of any contamination as there is no chemical processing etc. in the lease area. The water analysis report of Dug well/ Bore well will be submitted to DGM MS every year. The ground water table is a low level.

(C) **Air Quality Management:** -The air quality at present is good. However the dust due to drilling /blasting machine movement may form. The exhaust of the vehicles and Mining machinery may cause No2, So2 % higher. In such cases air sample will be drawn from near such activities shall be analysed & necessary protective measure for quality of air will be adopted from the SPM, APM,No_2 ,So_2 etc will be checked.

(D) **Waste Management**: -while mining the Basalt after drilling /blasting and loading of Rom, there will be same Mining losses, generation of soil & top Murrum waste. These quantities will be 3504 Cu. m including 2% mining loss & will be temporarily stacked as dumps in 7.5 m & will be handled for marketing, as foundation filling etc in Building, road Construction, as such there will be no dumps of this soil/waste to maintain for its stability, plantation etc.

(E) **Top Soil Management:** Top soil would be used for plantation.

(F) **Tailing dam Management**: There will not be any tailing dams at the mine.

(G) **Infrastructure:** The area is very small and at present there are no infrastructure facilities in the lease area.

(H) **Disposal of Mining Machineries:** The mine would be worked by Semi-mechanized method, compressor for jack hammer drilling & Tractor trollies for transportation of mineral would be provided at the mine. Life of mine would be more than the life of these machineries; old machines would be replaced by new one as and when required.

(I) **Safety & Security:** The mine is opencast and mining operation would be carried out throughout the year, fencing shall be provided to prevent the access to the mine pit except the approach road to the working site. The area is not used by the general public and is manned by security guards.

(J) **Disaster Management & Risk Assessment:** It is not applicable since mining operations is being carried out by open cast method of mining throughout the year on a small scale.

(K) **Care and Maintenance during temporary discontinuance:** An emergency plan for the situation of temporary discontinuance or incomplete program due to court order or due to statutory requirements will be drawn up & executed depending upon the situation. Since the mining is not hazardous and is on small scale, the situation for emergency plan will be evinced.

REHABILITATION AND RESETTLEMENT (R & R PLAN)

There is very little chance of Mining Lease area getting rehabilitated with any (remnant) activities.

PROJECT SCHEDULE AND COST ESTIMATES

Likely date of start of construction and likely date of completion (Time schedule for the project will be given)

The Boregaon (Jungli) Stone Quarry lease has been granted to Lessee on 1st March 2016 and valid for five years upto 28/02/2021. The Mining plan of lease area is approved by Dy. Director, Directorate of Geology and Mining, Nagpur on dated

28/07/2015 and this mining plan is prepared for enhancement of production for remaining years of lease period and submitted the same to the office of the Directorate of Geology & Mining, Nagpur.

The quarrying activities will be performed as per mine plan, and along with adequate control measures to minimize environmental damage. Life of mine on the basis of proved reserve and proposed production capacity of stone (Basalt) are given in following table:

Total Mineable Reserves (ROM)	= 4,90,101.4 Brass
Total Mined out Reserves	= 3,10,101.4 Brass
Net Mineable Reserves Available	= 1,80,000 Brass
Life of the mine @ 1,80,000 Brass	= 1 Years

MANPOWER RETRENCHMENT

Manpower retrenchment is an issue that will be come up at the end of 2 years of Plan period after renewal or at the time of exhaustion of Ore deposit in the area. Proper compensation as per rules will be given.

FINANCIAL ASSURANCE

Sr. No. **a.**	**Head** **b.**	**Area put on use at start of plan** **c.**	**Additional Requirement during plan period** **d.**	**Total** **e=(c+d)** **e.**	**Area considered as fully reclaimed & rehabilitated** **f.**	**Net area considered for calculation** **g=(c-f)** **g.**
1.	Area to be excavated	3.2165	-	3.2165	-	3.2165
2.	Storage for top soil	-	-	-	-	-
3.	Overburden /dump	-	-	-	-	-
4.	Mineral storage	-	-	-	-	-
5.	Infrastructure (Mine Office, Shelter, Store)	-	-	-	-	-
6.	Roads	-	-	-	-	-
7.	Green belt	0.5835	0	0.5835	-	0.5835
					Area Undisturbed	**0**
					Total area	**3.80 Ha**

RECOMMENDATIONS

The removal of Stone (Basalt) and allied activities has no impacts on the surrounding environment. Moreover based on development of this project certain positive impact will be there on the nearby village population in terms of infrastructure development like education, transport, communication, employment, health etc. Hence this project may be cleared and clearances accorded.

Site Photographs