

November

2022

Executive Summary for Conducting Public Hearing

FOR

“Thiru.B.Elavarasan Rough Stone Quarry over a total extent of 4.20.0 Ha”

At

S.F.No. 86 (Part-5) of Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District and Tamil Nadu State

Project Proponent:

**Thiru.B.Elavarasan,
S/O. Baskaran,
D.No.3/83, T.Thurinjihalli Village,
Thenkaraikottai Post,
Pappireddipatti Taluk,
Dharmapuri District.**

Project termed under schedule 1(a) Category B₁

Prepared By:

Ecotech Labs Pvt. Ltd.



NABET Accredited EIA Consultant

48, 2nd Main Road, Ram Nagar South Extension,

Pallikarani

Chennai -600100

EXECUTIVE SUMMARY

1. Project Background:

The Proposed project total extent area is 4.20.0 Ha, Government land in Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District. The category of project is B1, it is an existing rough stone quarry in Venkatesapuram village. The area is situated on elevated terrain sloping towards Western covered with Rough Stone which does not sustain any type of vegetation.

The quarry operation is proposed to carry out with conventional open cast mechanized mining with 7.0-meter vertical bench with a bench width of 5.0 meter. The Quarry operation involves shallow jack hammer drilling, slurry blasting, loading and transportation.

The quarry operation is proposed up to depth for 51 m below ground level (2 m Topsoil + 49 m Rough Stone). The Total Geological reserve is about 14,90,569 m³ of Rough Stone. The Mineable Reserves is about 11,04,399 m³ of Rough Stone. The year wise production/recoverable resources of rough stone for 5 years is about 11,04,399 m³.

Mining Plan was approved by The Deputy Director, Dept. of Geology & Mining, Krishnagiri vide Roc No: 1260/2018/Mines dated 11.12.2018. The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, wildlife sanctuaries as per Wildlife protection Act 1972, within the radius of 15 km.

2. Nature & Size of the Project

The Rough Stone Quarry over an extent of 4.20.0 Hectares land is located Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone

District : Krishnagiri

Taluk : Shoolagiri
 Village : Venkatesapuram
 S. F. Nos. : 86 (Part-5)
 Extent : 4.20.0 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12°45'15.35"N to 12°45'10.24"N
2	Longitude	77° 56' 53.37"E to 77° 56' 40.48"E
3	Site Elevation above MSL	834 m from MSL
4	Topography	Elevated terrain
5	Land use of the site	Government land
6	Extent of lease area	4.20.0 Ha
7	Nearest highway	MDR 422 (Shoolagiri - Berigai Road) – 3.0 km, E.
8	Nearest railway station	Hosur Railway station - 13.77 Km – SW
9	Nearest airport	Bangalore International Airport – 55.74 Km - NW
10	Nearest town / city	Town - Hosur - 13.19 Km -W City - Hosur - 13.19 Km -W District – Krishnagiri - 38.48 Km – SE
11	Rivers / Canal	• Ponnaiyar River – 5.15 SW
12	Lake	• Bukkasagaram Lake – 3.54 km, S • Muthali Lake – 4.57 km, NW • Doripalli Lake – 5.13, SE • Peddakullu lake – 5.32 km, W • Berikarai Lake – 6.72 km, NE • Kamandoddi Lake – 7.20 km, SW

		<ul style="list-style-type: none"> • Kelavarapelli Reservoir – 8.49 km, NW • Konerapalli Lake – 8.65 km, SE • Chappadi Lake – 9.44 km, SE • Tippalam Lake – 9.82 km, SW
13	Hills / valleys	Nil in 15 km radius
14	Archaeologically places	Nil in 15 km radius
15	National parks / Wildlife Sanctuaries	Nil in 15 Km radius
16	Reserved / Protected Forests	<ul style="list-style-type: none"> • Perandapalli Forest – 5.87 km, SW • Sanamavu reserve Forest – 7.47 km, SW
17	Seismicity	Proposed Lease area come under Seismic zone-II(low risk area)
18	Defense Installations	Nil in 15 Km radius

3. Need for the Project

❖ The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. The Rough stone extracted will be transported to be Stone crusher of district Krishnagiri.

❖ The raw Rough stone as well as the crushed material of stone is in high demand in real estate, construction projects as well as in building construction projects.

❖ Rough stone is quarried for producing crusher aggregates to the nearby building contractors, road contractors and nearby villagers.

❖ After quarrying the entire reserves mined out, the area will be used as water reservoir to have an artificial recharge to the nearby wells.

❖ No damage to the land is caused, no reclamation or back filling is required.

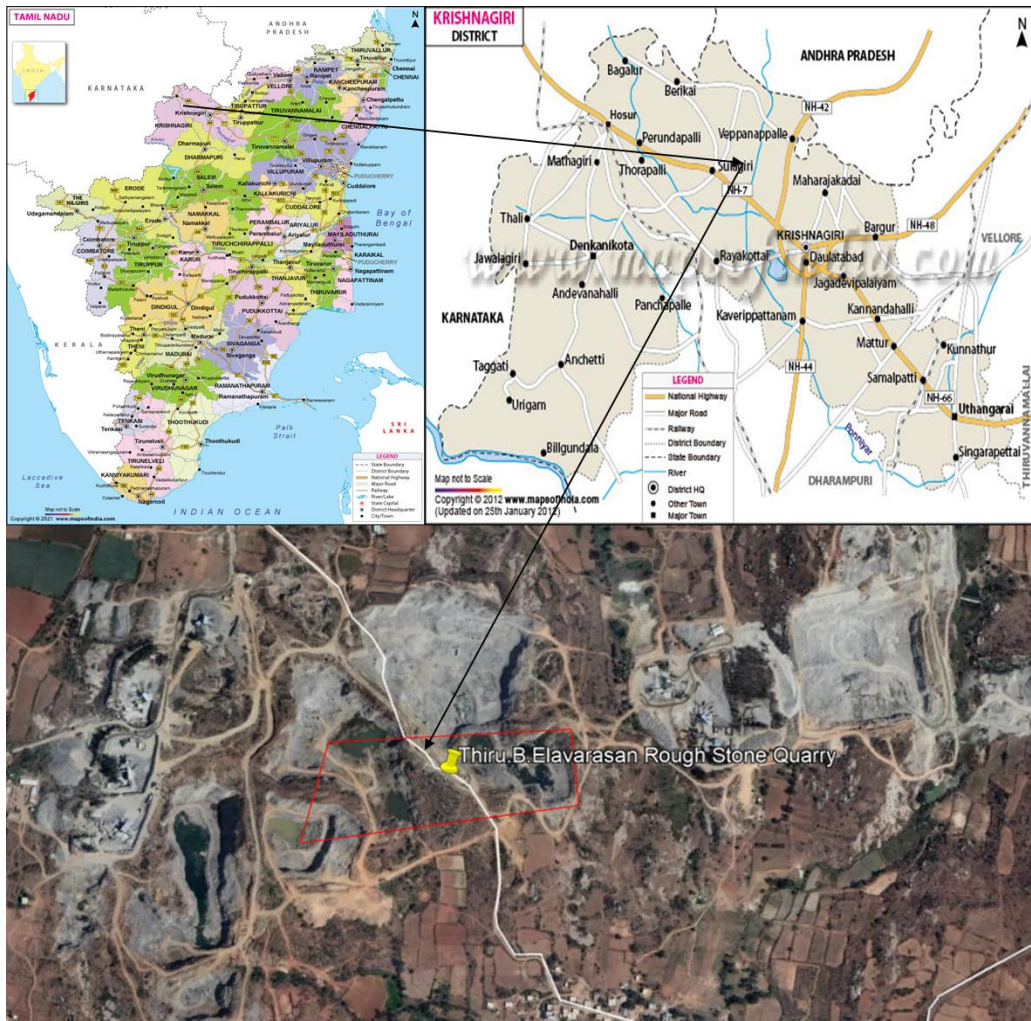


Figure 1: Location Map of the Project Site



Figure 2: Google Image of the Project Site

4. Charnockite

Charnockite and granitic gneisses are extensively quarried as rough stone which is used as aggregates for construction of building, laying of roads and for preparation of value added products like hollow blocks, pillar stones, M-sand etc. Charnockite occurs as massive bodies, greyish colour, medium to coarse grained, composed quartz, feldspar and orthopyroxene. At places, metamorphic gneissic banding (alternate dark and black colour) in charnockite is noticed. Top portion, it gives gneissic appearance but 1-5m depth below it is typical charnockite of grey colour.

5. Geological Resources

The geological reserves have been calculated based on the cross section method

Table 2. Geological resources

Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 95%	Mine waste in m3 @ 5%	Top Soil in m3
XY-AB	I	30	10	2				600
	II	21	1	7	147	140	7	
	III	30	10	7	2100	1995	105	
	IV	30	10	7	2100	1995	105	
	V	134	135	7	126630	120299	6331	
	VI	134	135	7	126630	120299	6331	
	VII	134	135	7	126630	120299	6331	
	VIII	134	135	7	126630	120299	6331	
TOTAL					510867	485326	25541	600
XY-CD	I	67	83	2				11122
	II	1	83	7	581	552	29	
	III	67	83	7	38927	36981	1946	
	IV	100	127	7	88900	84455	4445	

	V	100	127	7	88900	84455	4445	
	VI	100	127	7	88900	84455	4445	
	VII	100	127	7	88900	84455	4445	
	VIII	100	127	7	88900	84455	4445	
TOTAL					484008	459808	24200	11122
XY-EF	I	10	30	2				600
	II	10	30	7	2100	1995	105	
	III	10	30	7	2100	1995	105	
	IV	138	118	7	113988	108289	5699	
	V	138	118	7	113988	108289	5699	
	VI	138	118	7	113988	108289	5699	
	VII	138	118	7	113988	108289	5699	
	VIII	138	118	7	113988	108289	5699	
TOTAL					574140	545435	28705	600
GRAND TOTAL					1569015	1490569	78446	12322

Table 3. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODCUTION RESERVES									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Recoverable Reserve in m3 @ 95%	Mine waste in m3 @ 5%	Top Soil in m3
I-YEAR	XY-AB	I	30	1	2				60
		II	21	1	7	147	140	7	
		III	30	1	7	210	200	10	
		IV	30	1	7	210	200	10	
	XY-CD	I	67	73	2				9782
		II	1	71	7	497	472	25	

		III	67	66	7	30954	29406	1548	
		IV	100	105	7	73500	69825	3675	
	XY-EF	I	1	20	2				40
		II	1	18	7	126	120	6	
		III	1	13	7	91	86	5	
		IV	128	96	7	86016	81715	4301	
	TOTAL					191751	182164	9587	9882
II- YEAR	XY-AB	V	134	125	7	117250	111388	5862	
	XY-CD	V	100	100	7	70000	66500	3500	
	XY-EF	V	123	91	7	78351	74433	3918	
	TOTAL					265601	252321	13280	
III- YEAR	XY-AB	VI	134	120	7	112560	106932	5628	
	XY-CD	VI	100	95	7	66500	63175	3325	
	XY-EF	VI	118	86	7	71036	67484	3552	
	TOTAL					250096	237591	12505	
IV- YEAR	XY-AB	VII	134	115	7	107870	102477	5393	
	XY-CD	VII	100	90	7	63000	59850	3150	
	XY-EF	VII	113	81	7	64071	60867	3204	
	TOTAL					234941	223194	11747	
V- YEAR	XY-AB	VIII	134	110	7	103180	98021	5159	
	XY-CD	VIII	100	85	7	59500	56525	2975	
	XY-EF	VIII	108	76	7	57456	54583	2873	
	TOTAL					220136	209129	11007	
GRAND TOTAL						1162525	1104399	58126	9882

6. Mining

Opencast mining

The quarry operation is proposed to carry out with conventional open cast mechanized mining with 7.0 meter vertical bench with a bench width of 5.0 meter. The Quarry operation involves shallow jack hammer drilling, blasting, loading and transportation.

Process Description

- The reserves and resource are arrived based upon the Geological investigation
- Removal of Topsoil by Excavators and directly Loaded into Tippers.
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer of 25.5mm Dia.
- Minimum Blasting With Class 2 Explosives.
- Loading of Rough Stone By Excavators Into Tippers.

7. Water Requirement

Total water requirement for the mining project is 1.81 KLD. Domestic water will be sourced from nearby Venkatesapuram Village and other water will be source from nearby road tankers supply.

Table 4. Water Balance

Purpose	Quantity	Source
Drinking Water	0.81 KLD	Packaged Drinking water vendors available in Venkatesapuram which is about 1.1 km from project area
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	1.81 KLD	

8. Manpower

Total manpower required for the project is approximately 18 persons. Workers will be from nearby villages.

Table 5. Man Power

1.	Skilled	Operator	2 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	2 Nos
3.	Unskilled	Musdoor / Labors	5 Nos
		Cleaners	3 Nos
		Office Boy	1No
4.	Management & Supervisory staff		3 Nos
	Total =		18 Nos

No child less than 18 years will be entertained during quarrying operations.

9. Solid Waste Management

Table 6 Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	3.24 kg/day	Municipal bin including food waste
2	Inorganic	4.86 kg/day	TNPCB authorized recyclers

As per CPCB guidelines: MSW per capita/day =0.45 kg/day

Table 7 500m Radius Cluster Mine

1) Existing other quarries:

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	G.O No. & Date	Lease Period
1.	M/s. R.A.Blue Metals	Venkatesapuram & S.F.No.86 (Part-4)	4.00.0	Roc.No.68/2016/Mines dt: 10.08.2016	22.08.2016 to 21.08.2021
2.	Thiru.J.Shanmugam	Venkatesapuram & S.F.No.86 (Part-7)	2.50.0	Roc.No.70/2016/Mines dt: 28.09.2016	03.10.2016 to 02.10.2026
3.	Thiru.P.Selvaraju	Venkatesapuram & S.F.No.86 (Part-6)	2.50.0	Roc.No.69/2016/Mines dt: 13.10.2016	17.10.2016 to 16.10.2021
4.	Tvl.Mars Blue Metals	Venkatesapuram & S.F.No.135 (Part-2)	3.00.0	Roc.No.71/2016/Mines dt: 19.06.2019	19.06.2019 to 18.06.2024

2) Abandoned Quarries:

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Lease Period	Remarks
1.	Nil				

3) Proposed Quarries

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	G.O No. & Date	Lease Period
--------	-------------------	--------------------	-----------------	----------------	--------------

1.	Thiru.B.Elavarasan	Venkatesapuram S.F.No.86 (Part -5)	4.20.0	Roc.No.1260/2018/Mines dated: 02.11.2018	Precise area given
----	--------------------	---------------------------------------	--------	---	--------------------------

The Total extent of the Existing / Lease expired / Proposed quarries are 16.20.0 Ha

10. Land Requirement

The total extent area of the project is 4.20.0 Ha, Government land in Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District.

Table 8 Land Use Breakup

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	2.73.0	3.67.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt	Nil	0.51.0
05.	Unutilized Area	1.46.0	Nil
	TOTAL	4.20.0Ha	4.20.0Ha

11. Human Settlement

There are no habitations within 300m radius. There are villages located in this area within 5km radius of the quarry.

Table 9 Habitation

S.No	Village	Distance in Kms	Direction	Population
1	Venkatesapuram	1.5Kms	North	400
2	Mensandoddi	1.7 Kms	East	350
3	Bukkasagaram	3.0 kms	South	300

4	Payarkuttalai	4.0Kms	West	250
---	---------------	--------	------	-----

12. Power Requirement

The Rough Stone Quarry project does not require huge water and electricity for the project. **16 Litre** diesel per hour for excavator for mining and loading for Rough stone needed.

13. Scope of the Baseline Study

This chapter contains information on existing environmental scenario on the following parameters.

1. Micro – Meteorology
2. Water Environment
3. Air Environment
4. Noise Environment
5. Soil / Land Environment
6. Biological Environment
7. Socio-economic Environment

13.1 Micro – Meteorology

Meteorology plays a vital role in affecting the dispersion of pollutants, once discharged into the atmosphere. Since meteorological factors show wide fluctuations with time, meaningful interpretation can be drawn only from long-term reliable data.

- i) Average Minimum Temperature : 17 °C
- ii) Average Maximum Temperature. : 39 °C
- iii) Average Annual Rainfall of the area : 968 mm

13.2 Air Environment

Ambient air monitoring was carried out on monthly basis in the surrounding areas of the Mine Lease area to assess the ambient air quality at the source. To know the ambient air quality at a larger distance i.e. in the study area of 5 km. radius, air quality survey has been conducted at 5 locations. Major air pollutants like Particulate Matter (PM10), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM10 (57-33 µg/m³), PM2.5 (27-14 µg/m³), SO₂ (11-5 µg/m³), NO₂ (24-10 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from December 2021 to February 2022.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 59 dB(A) and 45 dB(A) respectively in Sri PattalammaDevi, Temple, Payarkuttalai. The minimum Day Noise and Night noise were 41 dB(A) and 33 dB(A) respectively which was observed in project site.

13.4 Water Environment

- The average pH ranges from 7.2 – 7.76.
- TDS value varied from 524 mg/l to 886 mg/l
- Hardness varied from 345 to 523 mg/l
- Chloride varied from 76 to 176 mg/l

13.5 Land Environment

The analysis results shows that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 6.8 to 8.8 with organic matter 0.19 to 0.32 %. The concentration of Nitrogen, Phosphorus & Potassium has been found to be in good amount in the soil samples.

13.6 Biological Environment

The proposed Mining lease area is mostly dry barren ground with small shrubs and bushes. No specific endangered flora & fauna exist within the mining lease area.

14. Rehabilitation/ Resettlement

- The overall land of the mine is Government land . There are no displacement of the population within the project area and adjacent nearby area. Social development of nearby villages will be considered in this project.
- The mine area does not cover any habitation. Hence the mining activity does not involve any displacement of human settlement.

15. Greenbelt Development

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major component of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Pungam, Naval etc will be planted along the lease boundary and avenues as well as over Non-active dumps at a rate of 100 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table.10 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram	80%	1000
Total		1000

16. Anticipated Environmental Impacts

16.1 Air Environment and Mitigation Measures

1. Water sprinkling will be done on the roads & unpaved roads.

2. Proper mitigation measures like water sprinkling will be adopted to control dust emissions.
3. Plantation will be carried out on approach roads, solid waste site & nearby mine premises.
4. To control the emissions regular preventive maintenance of equipments will be carried out.

16.2 Noise Environment and Mitigation Measures

1. Periodical monitoring of ambient noise will be done as per CPCB guidelines.
2. No other equipment except the transportation vehicles and excavator for loading will be allowed.
3. Noise generated by these equipments shall be intermittent and does not cause much adverse impact

17. Responsibilities for Environmental Management Cell (EMC)

The responsibilities of the EMC include the following:

- i. Environmental Monitoring of the surrounding area
- ii. Developing the green belt/Plantation
- iii. Ensuring minimal use of water
- iv. Proper implementation of pollution control measures

18. Environmental Monitoring Program

A monitoring schedule with respect to Ambient Air Quality, Water & Wastewater Quality, Noise Quality as per Tamil Nadu State Pollution Control Board (TNPCB), shall be maintained.

19. Project Cost

The total project cost is **Rs 3,94,30,000** for deployment of machinery and creation of infrastructural facilities like approach road, mine office / Workers Shed, First Aid Room etc., including electrifications and water supply

Table .11 Project Cost details

S. No.	Description	Cost
1	Fixed Asset Cost	Rs.3,24,30,000/-
2	Operational and Fencing Cost	Rs. 40,00,000
3	EMP Cost	Rs. 30,00,000
	Total	Rs. 3,94,30,000

20. Corporate Environmental Responsibility

The Corporate Environment Responsibility (CER) fund will be provided to the below activity.

Table 12 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Solar lights to Government High School, Venkatesapuram and Government Higher Sec. School, Bukkasagaram. Providing Projectors with internet facilities for enabling the government school children at higher secondary level for online classes and smart classes	7,35,600
Total		7,35,600

21. Benefits of the Project

- There is positive impact on socioeconomics of people living in the villages. Mining operations in the subject area has positive impact by providing direct and indirect jobs opportunities
- The project is environmentally compatible, financially viable and would be in the interest of construction industry thereby indirectly benefiting the masses.

- Quarrying in this area is not going to have any negative impact on the social or cultural life of the villagers in the near vicinity.