March 2023

Executive Summary for Conducting Public Hearing

FOR

"Thiru. A. Brian Balachander Rough Stone Quarry over a total extent of 2.50.0 Ha"

At

S.F.No. 86 (Part-1) of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State

Project Proponent:

Thiru.A.Brian Balachander,
S/o. Antony Richard Bhaskar,
D.No.2/29, 1st Main Road,
Padi, Tiruvallur,
Chennai – 600 050.

Project termed under schedule 1(a) Category B_1

Prepared By:

Ecotech Labs Pvt. Ltd.

NABET Accreditated EIA Consultant
48, 2nd Main Road, Ram Nagar South Extension,
Pallikaranai, Chennai -600100

EXECUTIVE SUMMARY

1. Project Background:

The Proposed project is in Government Poramboke Land having total extent area of 2.50.0 Ha, located at S.F.No. 86 (Part-1) of Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District and Tamil Nadu. The category of project is B1, it is an existing rough stone quarry in Venkatesapuram village. The area is situated on hilly terrain sloping towards the Southeast 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 a 5.0-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 42 m below ground level (2 m Topsoil + 40 m Rough Stone) Surface Ground Level Above Height is 12m and Surface Ground Level Below Depth 30m. The Total Geological reserve is about 7,46,195 m^3 of Rough Stone and 16,356 m^3 of Topsoil. The Mineable Reserves is about 2,48,290 m^3 of Rough Stone and 9,600 m^3 of Topsoil. The year wise production/recoverable resources of rough stone for 5 years is about 2,48,290 m^3 and 9,600m^3.

The Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.544/2022 Mines dated 20.06.2022. 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 2.50.0 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-1)
Extent : 2.50.0 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12° 45' 20.45"N to 12° 45' 19.85"N
2	Longitude	77° 56' 43.17"E to 77° 56' 35.03"E
3	Site Elevation above MSL	The altitude of the area is Maximum 868m and Minimum 858m above MSL.
4	Topography	Hilly terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	2.50.0 Ha
7	Nearest highway	MDR 422 – Berigai to Shoolagiri Road – 4.89Km - SE NH 48 – Hosur to Krishnagiri Road – 5.01Km - SW
8	Nearest railway station	Hosur Railway Station – 13.84 km - SWW
9	Nearest airport	Kempagowda International Airport – 54.69 km - N
10	Nearest town / city	Town - Shoolagiri – 11.22 km - SE City - Hosur – 12.50 km - SE District - Krishnagiri – 36.45 km - SE
11	Rivers / Canal	• Ponnaniyar River – 4.90Km - SW
12	Lake	• Muthali lake – 4.03Km – W • Peddakullu lake – 5.00Km – W • Bukkasagaram lake – 3.66Km – S • Doraipalli lake – 5.34Km – SSE • Bathlpalli lake – 9.99Km – SW • Government Vaari pond – 11.13Km - 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	• Berikai Extension RF – 1.06Km – SE • Sanamavu RF – 4.57Km – SW • Miditepalli RF – 2.27Km – N • Settipalli RF – 8.38Km – SE • Reserve Forest – 3. 13Km - 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

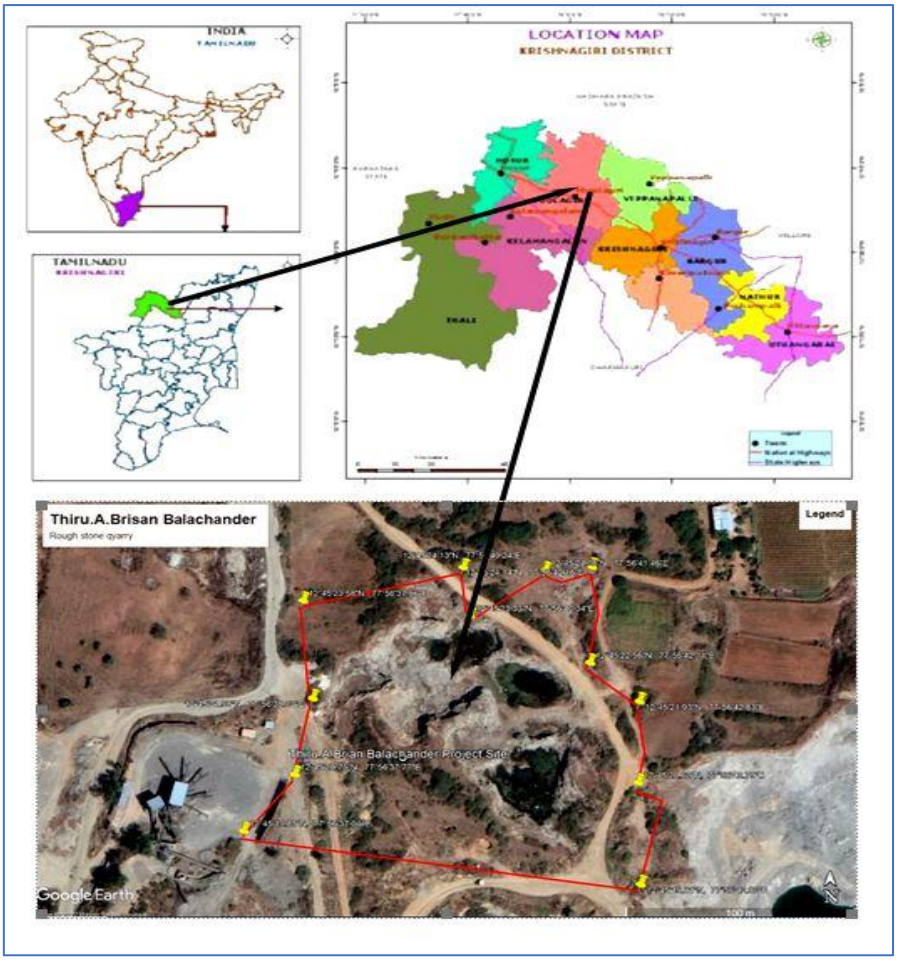

Figure 2: Google Image of the Project Site

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 resources have been calculated based on the cross-section method.

Table 2. Geological resources

GEOLOGICAL RESERVES							
Section	**Bench**	**L (m)**	**W (m)**	**D (m)**	**Volume in (Cu.m.)**	**Recoverable Reserve in Cu.m (100%)**	**Topsoil (Gravel) in Cu.m.**
XY-AB	I	94	87	2			16356
	II	54	12	5	3240	3240	
	III	71	89	5	31595	31595	
	IV	99	144	5	71280	71280	
	V	129	144	5	92880	92880	
	VI	152	144	5	109440	109440	
	VII	152	144	5	109440	109440	
	VIII	152	144	5	109440	109440	
	IX	152	144	5	109440	109440	
	X	152	144	5	109440	109440	
Total					**746195**	**746195**	**16356**

Table 3. Mineable Reserves

MINEABLE RESERVES							
Section	**Bench**	**L (m)**	**W(m)**	**D (m)**	**Volume in (Cu.m.)**	**Recoverable Reserve in Cu.m (100%)**	**Topsoil (Gravel) in Cu.m.**
XY-AB	I	75	64	2			9600

	II	45	23	5	5175	5175	
	III	57	64	5	18240	18240	
	IV	68	115	5	39100	39100	
	V	87	105	5	45675	45675	
	VI	101	95	5	47975	47975	
	VII	91	85	5	38675	38675	
	VIII	81	75	5	30375	30375	
	IX	71	65	5	23075	23075	
Total					**248290**	**248290**	**9600**

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION								
YEAR	**Section**	**Bench**	**L (m)**	**W (m)**	**D (m)**	**Volume in (m^3)**	**Recoverable Reserves in m^3 (100%)**	**Topsoil (Gravel) in m^3**
I-YEAR	XY-AB	I	75	64	2			9600
		II	45	23	5	5175	5175	
		III	57	64	5	18240	18240	
		IV	68	115	5	39100	39100	
II-YEAR		V	87	105	5	45675	45675	
III-YEAR		VI	101	95	5	47975	47975	
IV-YEAR		VII	91	85	5	38675	38675	
		VIII	81	75	5	30375	30375	
V-YEAR		IX	71	65	5	23075	23075	
Total						**248290**	**248290**	**9600**

6.Mining

Opencast mining

The quarry operation is proposed to carry out with conventional open cast mechanized mining with 5.0-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 3 Explosives.
- Loading of Rough Stone By Excavators Into Tippers.

7. Water Requirement

Total water requirement for the mining project is 2.0 KLD. Domestic water will be sourced from nearby Venkatesapuram Village and other water will be source from nearby road tankers supply.

Table 5. Water Balance

Purpose	Quantity	Source
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Venkatesapuram which is about 0.87 - W 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	**2.0 KLD**	

8. Manpower

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

Table 6. 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**

9. Solid Waste Management

Table 7 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 8 500m Radius Cluster Mine

1) Details of Existing quarries:

S. No.	Name of the Owner	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease Period
1.	……NIL……						

2) Details of abandoned/Old Quarries:

S.No.	Name of the lessee	Village	S.F. No	Extent	GO No. & Date	Lease period
1.	M/s. R.A. Blue Metals, No.50, Radhalakshmi Nilaya, Devasandra Main Road, Bangalore - 560036	Venkatesapuram village, Shoolagiri Taluk	86 (Part - 4)	4.00.0	Rc.No. 68/2016/ Mines Dated:10.08.2016	22.08.2016 to 21.08.2021
2.	Thiru.P.Selvaraju, S/o.Periyasamy, No.57-B-1, Kalliyannan Nagar, Kumarapalayam, Thiruchengodu, Namakkal District.	Venkatesapuram village, Shoolagiri Taluk	86 (Part - 6)	2.50.0	Rc.No. 69/2016/ Mines Dated:13.10.2016	17.10.2016 to 16.10.2021
3.	Thiru.J.Shanmugam, S/o. Jaganathan, M/s. S.S. Blue metals, No.4, Pillaiyar Koil street,	Venkatesapuram village, Shoolagiri Taluk	86 (Part - 7)	2.50.0	Rc.No. 70/2016/ Mines Dated:28.09.2016	03.10.2016 to 02.10.2016

	Marandahalli Post, Palacode taluk, Dharmapuri Dist.					

3) Details of Proposed Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	Thiru.B.Elavarasan, S/o. Baskaran, D.No. 3/83, T.Thurinjihalli village, Thenkaraikottai post, Pappireddipatti taluk, Dharmapuri Dist.	Venkatesapuram village, Shoolagiri Taluk	Rough stone	86 (Part-5)	4.20.0	Rc. No. 1260/2018/ Mines Dated:02.01. 2018	Precise area given
2.	S.R.Enterprises, No.25, Shanthi nagar, west 2nd cross, Hosur taluk, Krishnagiri Dist	Venkatesapuram village, Shoolagiri Taluk	Rough stone	86 (Part-3)	2.00.0	Rc. No. 546/2022/ Mines Dated:04.05. 2022	Precise area given
3.	Thiru.A.Brian Balachander, S/o Antony Richard Bhaskar, D.No. 2/29, 1st main road, padi, Thiruvallur, Chennai – 600 050	Venkatesapuram village, Shoolagiri Taluk	Rough stone	86 (Part-1)	2.50.0	Rc. No. 546/2022/ Mines Dated:04.05. 2022	Instant proposal

4. Details of other Proposed / applied quarries

Sl. No	Name of the lessee	Village & Taluk	S.F. No	Extent in Ha	GO No.& Date	Lease period
1.	-	Venkatesapuram village, Shoolagiri Tk	86 (Part-2)	2.00.0	-	-

The Total extent of the Existing / Lease expired / Proposed quarries are 19.70.0 Ha

10. Land Requirement

The total extent area of the project is 2.50.0 Ha, Government Poramboke land in Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District.

Table 9 Land Use Breakup

S. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarrying Pit	0.68.0	1.47.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.01.0
4.	Green Belt	Nil	1.01.0
5.	Unutilized Area	1.81.0	Nil
	Total	**2.50.0**	**2.50.0**

11. Human Settlement

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

Table 10 Habitation

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	NW	Alnatham	327	1.86 Km
2	S	Bukkasagaram	2126	3.37 Km
3	E	Mensandoddi	358	2.12 Km
4	W	Venkatesapuram	2873	0.87 km

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 ^{0}C

ii) Average Maximum Temperature. : 3 9 ^{0}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 10 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 PM_{10} (57-39 µg/m³), PM2.5 (27-15 µg/m³), SO_2 (13-4 µg/m³), NO_2 (29-10 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from December 2022 to February 2023.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 59 dB(A) and 45 dB(A) respectively in in Sivaraman green Garden. The minimum Day Noise and Night noise were 40 dB(A) and 35 dB(A) respectively which was observed in project site. The observed values are all well within the Standards prescribed by CPCB.

13.4 Water Environment

- The average pH ranges from 7.2 – 7.76.
- TDS value varied from 538 mg/l to 880 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 Poramboke land. There is 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. The Green belt has been recommended as one of the major components 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 250 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table.11 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%	1250
Total		**1250**

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 4,96,98,566** 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 12 Project Cost details

S. No.	Description	Cost
1	Fixed Asset Cost	Rs.3,83,00,000/-
2	Operational and Fencing Cost	Rs. 30,00,000/-
3	EMP Cost	Rs. 83,98,566/-
	Total	**Rs. 4,96,98,566**

20. Corporate Environmental Responsibility

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

Table 13 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	Government High School, Venkatesapuram – Provision of ➢ Smart board, ➢ Library, ➢ Environmental books for library (in Tamil language), ➢ Greenbelt facilities and	5,00,000

	➢ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture.	
Total		**5,00,000**

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.

……