

November 2024

Executive Summary

Thiru. V Nagaraja Rough Stone Quarry – 2.16.0 Ha

For

PUBLIC HEARING

At

**S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk,
Krishnagiri District**

PROJECT PROPONENT

**Thiru V Nagaraja,
Owner
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District-560 105**

EIA Notification 2006 Schedule 1(a) Category B1 (Cluster)

**Prepared By:
Ecotech Labs Pvt. Ltd.**



**NABET Accredited EIA Consultant
No.48, 2nd Main Road,
Ram Nagar South Extension,
Pallikaranai, Chennai-600100**

EXECUTIVE SUMMARY

1. Project Background:

The existing Rough Stone Quarry is over an extent of 2.16.0 Ha. It is a Patta land in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District. The project comes under Category B1. The area is situated on hilly terrain sloping towards North Eastern side.

The quarry operation is proposed to carry out with conventional open cast semi-mechanized mining with 5.0 meter vertical bench and 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 of 47 m (12 m topsoil and 35 m rough stone) (including the existing depth) for a period of 3 years. The total Geological Resources is about 696340 m³ of Rough stone and 144937 m³ of Topsoil. The Mineable Reserves is estimated at 253495 m³ of Rough Stone and 107722 m³ of Topsoil to be mined for (Sixty months) Five years only. The Precise Area Communication Letter received from The District Collector, Department of Geology and Mining, Krishnagiri District vide Rc. No.478/2018/Mines 2 dated 26.07.2018. The Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024.

The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, within the radius of 15Km.

2. NATURE & SIZE OF THE PROJECT

The existing Rough Stone Quarry over an extent of 2.16.0 Hectares land is located at Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone Quarry

District : Krishnagiri

Taluk : Shoolagiri
 Village : Venkatesapuram
 S. F. Nos. : 287/1
 Extent : 2.16.0 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1.	Latitude	12° 45'13.88" N To 12° 45'22.70" N
2.	Longitude	77° 57' 34.81" E To 77° 57' 39.68" E
3.	Site Elevation above MSL	847 m from MSL
4.	Topography	Hilly terrain topography
5.	Land use of the site	Patta land
6.	Extent of lease area	2.16.0 Ha
7.	Nearest highway	SH 422 – Berigai – Shoolagiri Road -1.73 km - E
8.	Nearest railway station	Hosur Railway Station – 15.46 Km –W
9.	Nearest airport	Hosur Airport – 23.52 Km - W
10.	Nearest town / city	Town – Hosur – 14.74 Km – W City - Hosur – 14.74 Km – W District - Krishnagiri –37.45 Km - SE
11.	Rivers / Canal	❖ Ponnaiyar river – 6.67 km, W
12.	Lake	❖ Muthali lake – 5.9 km NNW ❖ Pedakulla Lake – 4.9 km, NW ❖ Kasavugattu Lake – 11.63 km, W ❖ Tippalam Lake – 11.41 km, W ❖ Kamandoddi Lake – 7.56 km, S ❖ Old Lake – 8.42 km, S ❖ Konerapalli lake – 8.3 km, SSE ❖ Chapadi lake – 8.83 km, SSE ❖ Kalavarapalli Reservoir – 9.75km, SW ❖ Bukkasagaram Lake – 3.8km, S ❖ Doripalli Lake – 5 km, S ❖ Gobasandram River – 8.86 km, S ❖ Kumudapalli Lake – 9.85 km, SW ❖ Moranapalli Lake – 10.82 km, W ❖ Bathlapalli Lake – 11.74 km, W ❖ Chennathur lake – 12 km, SW ❖ Therpet Lake – 14 km, W ❖ Alasanatham lake – 14 km, W

13.	Dam	❖ Shoolagiri dam – 12.59 km, SE
14.	Hills / valleys	❖ Nil in 15 km radius
15.	Archaeologically places	❖ Nil in 15 km radius
16.	National parks / Wildlife Sanctuaries	❖ Cauvery North Wildlife Sanctaury – 25 km, S ❖ Cauvery South Wildlife Sanctaury – 50 km, S
17.	Reserved / Protected Forests	❖ Punnagaram R.F. – 0.28km, S ❖ Berigai Extension R.F. – 1.1km, N ❖ Perandapalli R.F – 6.65 km, SW ❖ Sanamavu R.F. – 13.72 km, SW
18.	Seismicity	Mine Lease area comes under Seismic zone-III

2. NEED FOR THE PROJECT

- ❖ Rough stone is quarried for producing crusher aggregates to the nearby building contractors, road contractors and nearby villagers.
- ❖ After the entire reserves mined out, the area will be used as water reservoir to have an artificial recharge to the nearby wells.
- ❖ The rough stone is hard and compact in nature. It can be crushed only in crushers for producing aggregates.
- ❖ As the mining continues, no reclamation or back filling is required.

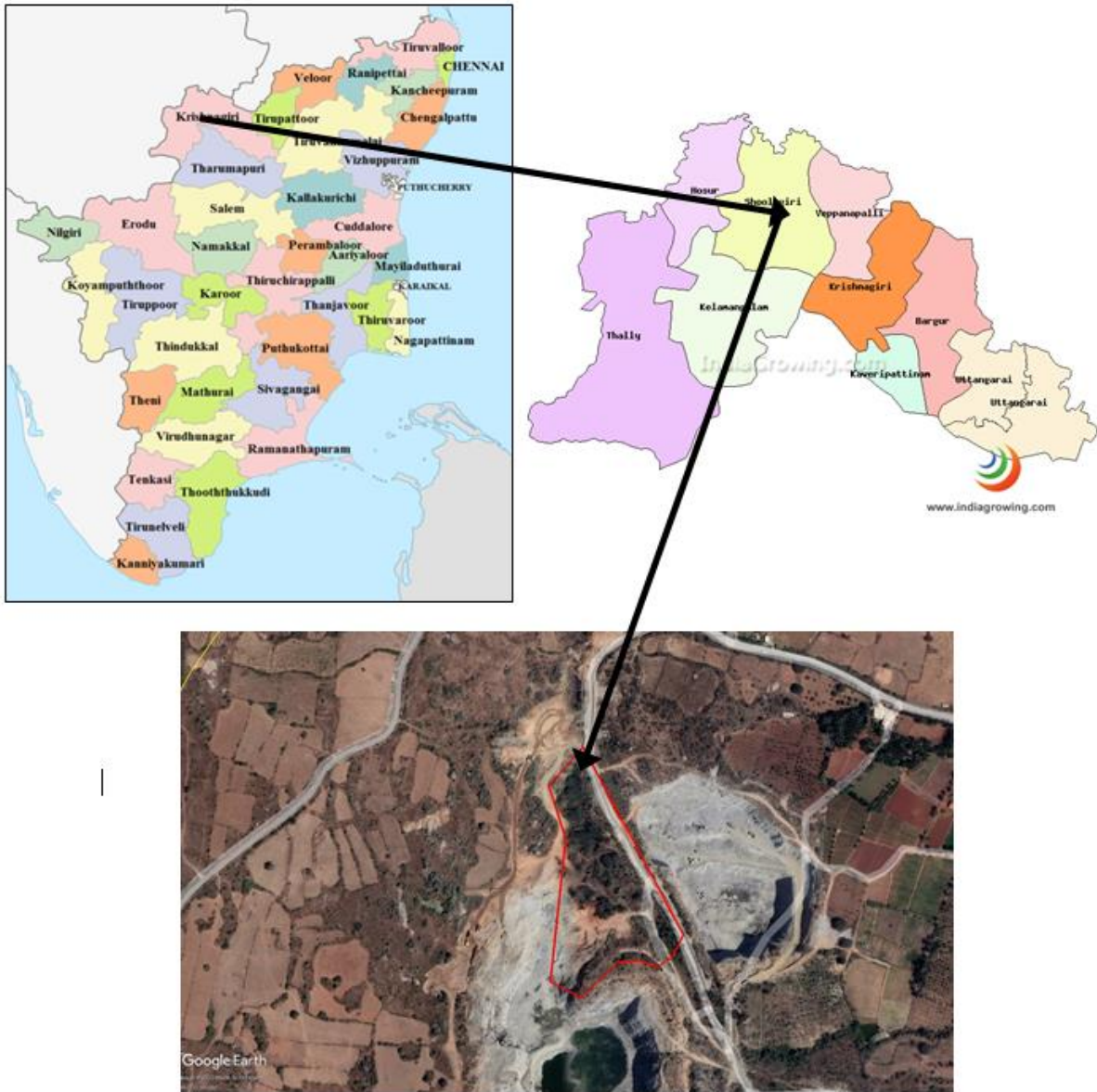


Figure 1: Location Map of the Project Site

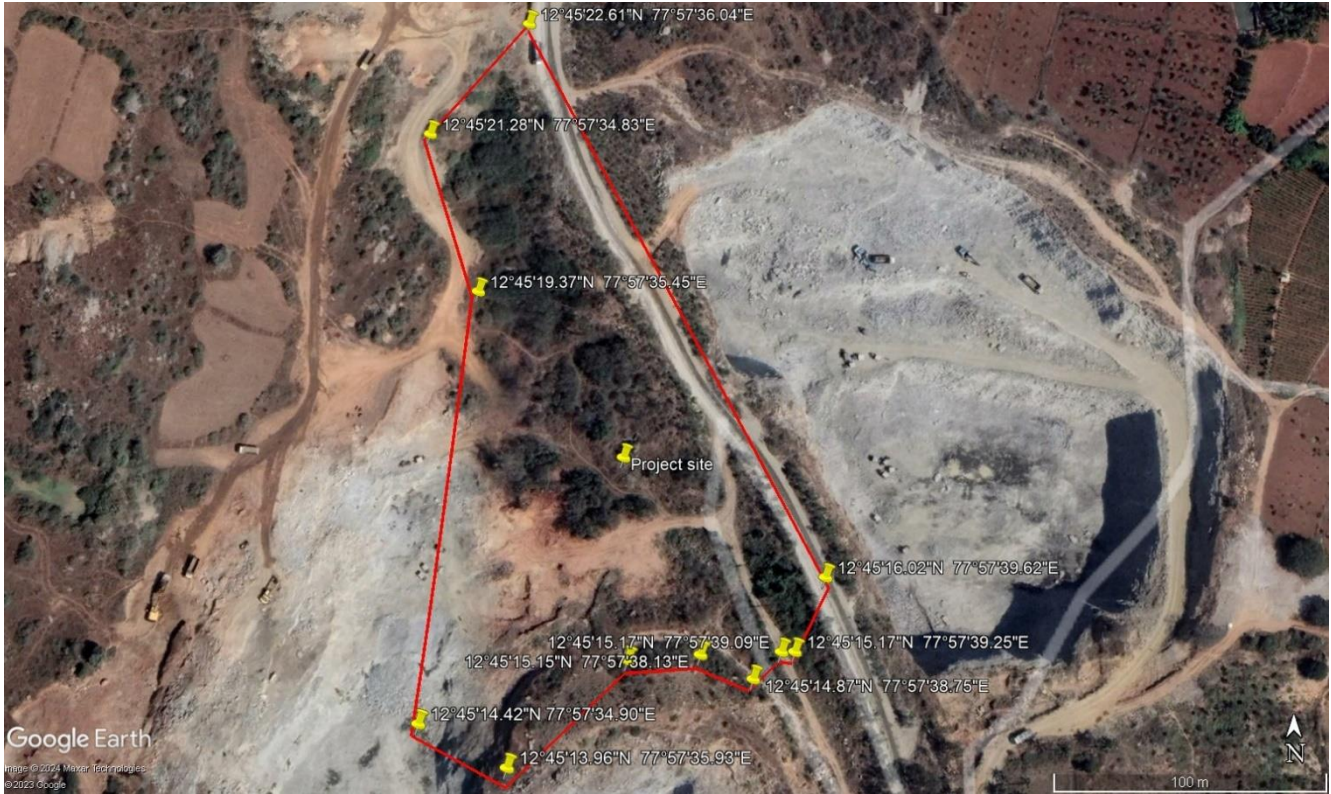


Figure 2: Google Image of the Project Site

4. CHARNOCKITE

Generally, the Charnockite is grey to greenish colored, coarse to medium grained, greasy nature with or without garnet. Because of the limited outcrops, the quarry sections are studied to infer the various interrelationships between the litho units. Charnockite is interbanded nature with crystalline carbonate rocks are observed in most of the quarry in Pandalgudi, Lakshmipuram, Gopalapuram, Sundakottai chinnakamanpatti, Weathering of the Charnockite on the surface gives a deceptive look of gneiss and in the quarry sections at depth the fresh charnockite is exposed, which are well exemplified in almost all the Charnockite quarry sections.

5. GEOLOGICAL RESOURCES

Table 2. Geological resources

GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Geological Reserve in Cbm (100%)	Topsoil in Cbm
XY-AB	I	140	80	2			22400
	II	140	80	5			56000
	III	140	80	5			56000
	IV	140	80	5	56000	56000	
	V	140	80	5	56000	56000	
	VI	140	80	5	56000	56000	
	VII	140	97	5	67900	67900	
	VIII	140	97	5	67900	67900	
	IX	140	97	5	67900	67900	
	X	140	97	5	67900	67900	
Total=					439600	439600	134400
XY-CD	I	41	36	2			2952
	II	41	1	5			205
	III	41	36	5			7380
	IV	41	36	5	7380	7380	
	V	41	36	5	7380	7380	
	VI	41	36	5	7380	7380	
	VII	85	138	5	58650	58650	
	VIII	85	138	5	58650	58650	
	IX	85	138	5	58650	58650	
	X	85	138	5	58650	58650	
Total=					256740	256740	10537
Grand Total=					696340	696340	144937

Table 3. Mineable Resources

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Minable Reserve in Cum(100%)	Topsoil in Cum
XY-AB	I	130	70	2			18200
	II	128	68	5			43520
	III	123	63	5			38745
	IV	118	58	5	34220	34220	
	V	113	53	5	29945	29945	
	VI	108	48	5	25920	25920	
	VII	103	45	5	23175	23175	
	VIII	98	35	5	17150	17150	
	IX	93	25	5	11625	11625	
	X	88	15	5	6600	6600	
Total=					148635	148635	100465
XY-CD	I	41	26	2			2132
	II	41	1	5			205
	III	41	24	5			4920
	IV	41	19	5	3895	3895	
	V	41	14	5	2870	2870	
	VI	41	9	5	1845	1845	
	VII	70	91	5	31850	31850	
	VIII	65	81	5	26325	26325	
	IX	60	71	5	21300	21300	
	X	55	61	5	16775	16775	
Total=					104860	104860	7257
Grand Total=					253495	253495	107722

Table 4. Year wise Production Plan

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Reserves in Cum(100%)	Topsoil in Cum
2023-2024	XY-AB	I	130	70	2			18200
		II	128	68	5			43520
		III	123	63	5			38745
		IV	118	58	5	34220	34220	
		V	113	53	5	29945	29945	
	XY-CD	I	41	26	2			2132

		II	41	1	5			205
		III	41	24	5			4920
		IV	41	19	5	3895	3895	
		V	41	14	5	2870	2870	
Total=						70930	70930	107722
2024- 2025	XY-AB	VI	108	48	5	25920	25920	
		VII	103	45	5	23175	23175	
	XY-CD	VI	41	9	5	1845	1845	
		VII	70	91	5	31850	31850	
Total=						82790	82790	
2025- 2026	XY-AB	VIII	98	35	5	17150	17150	
		IX	93	25	5	11625	11625	
		X	88	15	5	6600	6600	
	XY-CD	VIII	65	81	5	26325	26325	
		IX	60	71	5	21300	21300	
		X	55	61	5	16775	16775	
Total=						99775	99775	
Grand Total=						253495	253495	107722

The proposed rate of production of Rough stone is estimated as 253495 m³ for three years.

6. MINING

Opencast mining

The quarry operation is proposed to carry out with conventional open cast semi-mechanized mining with 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.

Process Description

- The reserves and resource are arrived based upon the Geological investigation
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer 25.5 mm Dia.
- Minimum Blasting With Class 3 Explosives.

7. Water Requirement

This Rough stone quarry project does not require huge water and electricity for the project.

Table 5. Water Balance

Purpose	Quantity	Sources
Drinking Water	0.9 KLD	Packaged Drinking water vendors available in Athimugam Village which is about \approx 1.5 Km –
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
Total	1.9 KLD	

8. Manpower

The nearby villagers will be getting employment benefits in the proposed working quarry.

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 / Labours	5 Nos
		Cleaners	3Nos
		Office Boy	1No
4.	Management & Supervisory staff		3No.
	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 Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
1.	Thiru. V Nagaraja	Venkatesapuram Village	287/1	2.16.0	Rc. No. 478/2018/Mines	19.02.2021 To

	S/o Venkatappa Reddy	Shoolagiri Taluk			dated 28.05.2018	18.02.2031
2.	M/s Sumuka Blue Metals & M Sand Prop. Thiru V Nagaraj	Venkatesapuram Village Shoolagiri Taluk	294 (Part - 2)	3.75.0	Rc. No. 216/2018/Mines dated 09.03.2018	30.04.2021 to 29.04.2031

2) Details of Abandoned /Old Quarries

S. No.	Name of the Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
1.	Thiru. S. Rajendiran S/o Sengodan	Venkatesapuram Village Shoolagiri Taluk	288	5.00.0	Rc. No. 214/2008/Mines-2 dated 30.07.2008	30.07.2008 to 29.07.2018
2.	Thiru N Muniraj	Venkatesapuram Village Shoolagiri Taluk	285 Part	5.00.0	Rc. No. 123/2008/Mines-2 dated 19.05.2008	04.07.2018 to 03.07.2023

3) Details of Other Proposed /Applied Quarries

S. No.	Name of the Lessee	ROC. No. dated	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
1.	-----Nil-----					

10. Land Requirement

The total extent area of the project is 2.16.0 Ha, Patta land in Venkatesapuram Village, Shoolagiri Taluk, and Krishnagiri District.

Table 9 Land Use Breakup

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	NIL	1.96.0
2.	Infrastructure	NIL	0.01.0
3.	Roads	NIL	0.01.0
4.	Green Belt & dump	NIL	0.15.0

5.	Unutilized	2.16.0	0.03.0
	Total =	2.16.0Ha	2.16.0Ha

11. Human Settlement

There are no habitations within 300m radius. There are villages located in this area within 15 km radius of the quarry.

Table 10 Habitation

Direction	Village	Distance in Kms	Population
North	Mensandoddi	0.5Kms	220
East	Athimugam	2.0Kms	300
South	Bukkasagaram	4.0kms	290
West	Venkateshapuram	2.5Kms	280

12. Power Requirement

The Electricity for Mines office and Lights only at nights (working is restricted on day time only between 9 Am to 5 Pm). Diesel (HSD) will be used for quarrying machineries around **1143514 litres of HSD** will be used for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the Night time the power will be taken from nearby electric poles after obtaining permission from concerned authorities.

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 : 18° C
- ii) Average Maximum Temperature. : 38°Celsius
- iii) Average Annual Rainfall of the area: 800 mm-900 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 7 locations. Major air pollutants like Particulate Matter (PM10), Sulphur Dioxide (SO₂), and Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (33-63 µg/m³), PM_{2.5} (13-33 µg/m³), SO₂ (5-21 µg/m³), NO₂ (12-41 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from November 2023 to January 2024.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 55 dB(A) and 45 dB(A) in project site respectively. The minimum Day Noise and Night noise were 37 dB (A) and 30 dB(A) respectively which was observed in Sree Vanamuneshwara Swamy Temple, Nerigam. The observed values are all well within the Standards prescribed by CPCB.

13.4 Water Environment

- The average pH ranges from 7.16 and 8.13
- TDS value varied from 495 mg/l to 1025 mg/l
- Hardness varied from 339 to 634 mg/l
- Chloride varied from 50.8 to 288 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 6.98 to 8.01 with organic matter 0.41

to 0.71%. The concentration of Nitrogen, Phosphorus & Potassium has been found to be in good amount in the soil samples.

13.6 Biological Environment

The existing 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 a Patta land. There is no hutment in the lease area. No human being will be displaced from the project area so no person will be affected contrary local people will get job opportunities and better facilities. There is no rehabilitation & resettlement of people is required.

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, Vilvam, Panai, etc will be planted along the lease boundary and avenues as well as over Non-active dumps at a rate of 2500 trees 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, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Thethankottai Maram, Pungam	80%	1080
Total	1080	

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 equipment 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 65,90,000/-** 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 .12 Project Cost details

S. No.	Description	Cost (Rs.)
1	Fixed cost	25,90,000
2	Operational cost	40,00,000
	Total Cost	65,90,000

Table .13 EMP Cost

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	21600	21600
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	30000	20000
	Air Quality will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	20000
	Muffle blasting - To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	0
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	25000	2500
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed	5000	0

	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	43200
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	4000 0	10000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Ambient Noise will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Competent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	5000 0	2000

	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	12674 75
Water Environment	Water management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	2160 0	5000
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	1000	5000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	7000	1000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	7200 0	18000
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	18000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	4320
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	1000 0	2000

	Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	4320 00	10000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	1080 00	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	2000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	78000 0
Green Belt Development	Green belt development - 500 trees per one hectare (200 Inside Lease Area & 300 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	8640 0	12960
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @	1944 00	19440

		30 per plant maintenance (recurring)		
			1381000	2299495

Year 1	Year 2	Year 3	Year 4	Year 5
3680495	2414470	2535193	2661953	2795051

Year 6	Year 7	Year 8	Year 9	Year 10
3625303	3081543	3235620	3397401	3567271

Total EMP Cost for 10 Years - Rs. 3,09,94,301/-

20. Corporate Environmental Responsibility

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

Table 14 CER Cost

S.No.	CER Activity	Cost (Rs)
1.	Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Greenbelt development and Environmental awareness books in library, Solar lights to Govt High School, Athimugam – 2.03 km, SE	5,00,000/-
Total		5,00,000

21. Benefits of the Project

- There is positive impact on socio-economics 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.