

**November  
2024**

**Executive Summary for Conducting Public Hearing  
FOR**

**“M/s. Sumuka Blue metals and M. Sand Rough Stone  
Quarry over a total extent of 3.75.0 Ha”**

**At**

**S.F.No. 294 (Part-II) of Venkatesapuram Village,  
Shoolagiri Taluk, Krishnagiri District, Tamilnadu State**

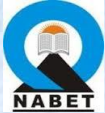
**Project Proponent:**

**M/s. Sumuka Blue metals and M. Sand,  
Proprietor V.Nagaraja,  
Athimugam Village, Shoolagiri Taluk,  
Krishnagiri District-635 105**

**Project termed under schedule 1(a) Category B<sub>1</sub>**

**Prepared By:**

**Ecotech Labs Pvt. Ltd.**



**NABET Accredited EIA Consultant**

**48, 2<sup>nd</sup> 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 3.75.0 Ha, located at S.F.No. 294 (Part-2) 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 Thuppuganapalli 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 36m – 11.0m Topsoil + 25.0m Rough Stone. The Total Geological resources is about 13,32,975m<sup>3</sup> of Rough Stone and 77,148m<sup>3</sup> of Topsoil. The Mineable Reserves are about 6,40,075m<sup>3</sup> of Rough Stone and 32,519m<sup>3</sup> of Topsoil. The year wise production/recoverable reserves of rough stone for 3 years are about 4,11,755m<sup>3</sup> of Rough stone and 32,519m<sup>3</sup> of Topsoil. Total proposed period of mining Three years (Based on the modified mining plan).

The Modified Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.216/2018/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, 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 3.75.0 Hectares land is located Venkatesapuram Village of Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone.  
District : Krishnagiri  
Taluk : Shoolagiri  
Village : Venkateasapuram  
S. F. Nos. : 294 (Part-2)  
Extent : 3.75.0 Hectares

**Table 1: Brief Description of the Project**

S. No	Particulars	Details
1	Latitude	12° 45'13.34" N To 12° 45'21.01" N
2	Longitude	77° 57' 28.25" E To 77° 57' 35.28" E
3	Site Elevation above MSL	790m from MSL
4	Topography	Elevated terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	3.75.00 Ha
7	Nearest highway	NH 44/AH 45: Dharmapuri – Bengaluru Road – 8.20 kms, S MDR 456/SH 17C: Berigai – KGF Road: 5.93 kms, N MDR 422: Berigai – Shoolagiri Road: 1.62 kms, E
8	Nearest railway station	Hosur Railway Station – 15.18 km, W
9	Nearest airport	Bangalore Kempegowda International Airport – 56.19 km, NW
10	Nearest town / city	Town - Shoolagiri – 10.89 km, SE City - Krishnagiri - 35.58 Km – SE District - Krishnagiri - 35.58 Km - SE
11	Rivers / Canal	• Ponnaiyar River – 6.46 km - W
12	Lake	• Bukkasagaram Lake – 3.72 kms, S • Dorippali Lake – 5.07 kms, S • Koladasapuram Lake – 5.72 km, W • Muthali Lake – 5.61 kms, W • Thummanapalli Lake – 6.13 kms, SW • Berikai Lake – 6.03 kms, N • Gangapuram Lake – 6.92 kms, SW • A.Kothur Lake – 7.25 kms, SSW

		<ul style="list-style-type: none"> <li>• Subbagiri Lake – 7.28 kms, S</li> <li>• Kamandoddi Lake – 7.52 kms, SW</li> <li>• Kamandoddi Old Lake – 8.37 kms, S</li> <li>• Kumudapalli Lake – 9.62 kms, SW</li> <li>• Peddakullu Lake – 6.59 kms, W</li> <li>• Subbagiri Lake – 7.31 kms, S</li> <li>• Kelavarapalli Dam – 9.32 kms, W</li> </ul>
13	Hills / valleys	<ul style="list-style-type: none"> <li>• Chakkarlu hills – 6.75 Kms, SE</li> </ul>
14	Archaeologically places	<ul style="list-style-type: none"> <li>• Krishnagiri Fort – 36.27 Km - SE</li> </ul>
15	National parks / Wildlife Sanctuaries	<ul style="list-style-type: none"> <li>• Cauvery North Wildlife Sanctuary – 23.97 Km – S</li> <li>• Cauvery South Wildlife Sanctuary – 47.21 Km - SW</li> </ul>
16	Reserved / Protected Forests	<ul style="list-style-type: none"> <li>• Berigai RF – 0.37 kms, S</li> <li>• Sanamavu RF – 5.69 kms, SW</li> <li>• Settipalli RF – 5.74 kms, SE</li> <li>• Miditepalli RF – 2.47 kms, NW</li> <li>• Berigai Extension RF – 2.67 kms, NE</li> <li>• Nallur RF – 11.89 kms, SE</li> </ul>
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 backfilling is required.



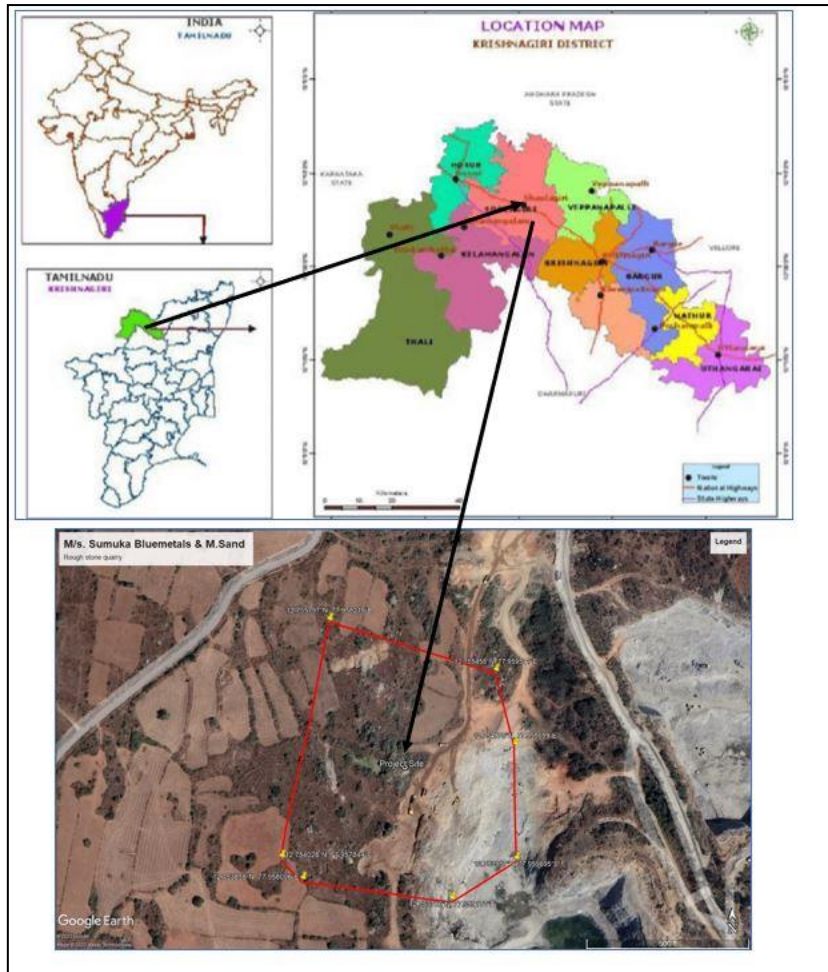


Figure 1: Location Map of the Project Site

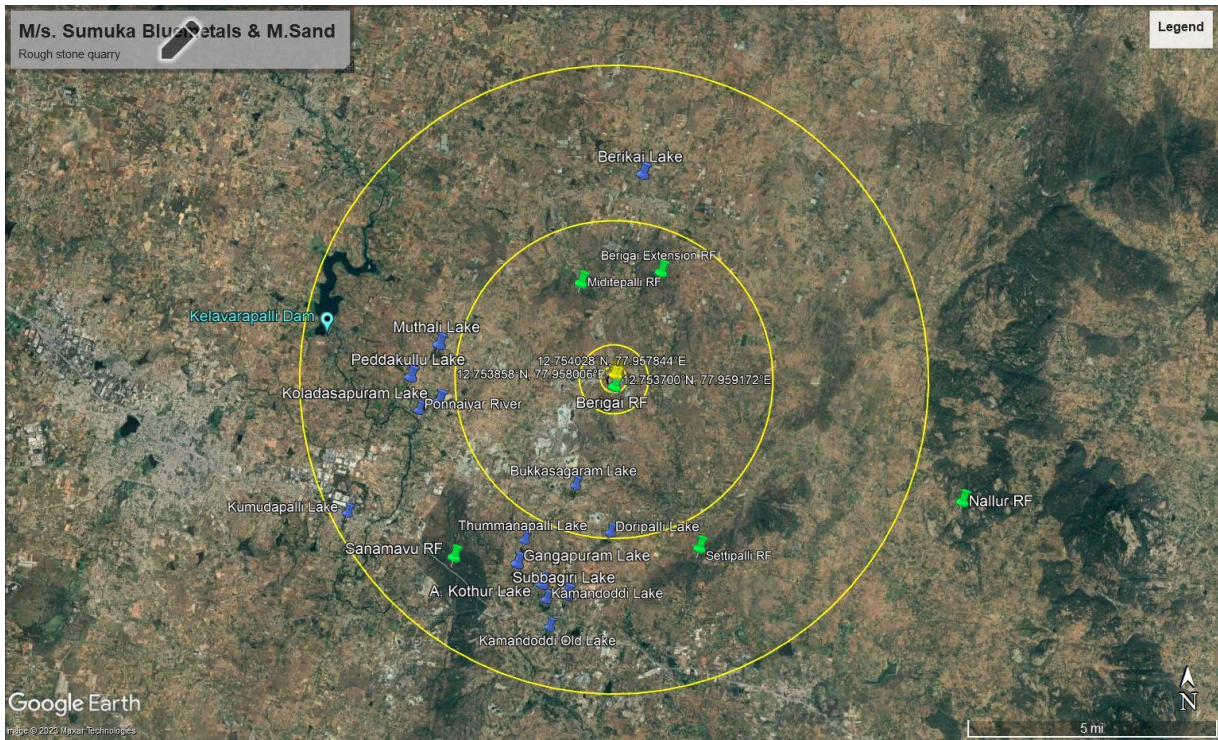


Figure 2: Google Image of the Project Site

#### 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**

<b>GEOLOGICAL RESERVES</b>							
<b>Section</b>	<b>Bench</b>	<b>L (m)</b>	<b>W (m)</b>	<b>D (m)</b>	<b>Volume in (Cu.m.)</b>	<b>Geological Reserve in Cbm (100%)</b>	<b>Topsoil in Cbm</b>
XY-AB	I	13	76	1			988
	II	112	60	5			33600
	III	112	76	5			42560
	IV	179	105	5	93975	93975	
	V	210	132	5	138600	138600	
	VI	210	132	5	138600	138600	
	VII	210	132	5	138600	138600	
	VIII	210	196	5	205800	205800	
	IX	210	196	5	205800	205800	
	X	210	196	5	205800	205800	
	XI	210	196	5	205800	205800	
<b>Total=</b>					<b>1332975</b>	<b>1332975</b>	<b>77148</b>

**Table 3. Mineable Reserves**

<b>MINEABLE RESERVES</b>							
<b>Section</b>	<b>Bench</b>	<b>L (m)</b>	<b>W (m)</b>	<b>D (m)</b>	<b>Volume in (Cu.m.)</b>	<b>Minable Reserve in Cbm (100%)</b>	<b>Topsoil in Cbm</b>
XY-AB	I	89	66	1			5874
	II	1	49	5			245
	III	88	60	5			26400
	IV	150	84	5	63000	63000	
	V	171	106	5	90630	90630	
	VI	161	101	5	81305	81305	
	VII	151	96	5	72480	72480	
	VIII	141	148	5	104340	104340	
	IX	131	138	5	90390	90390	
	X	121	128	5	77440	77440	
	XI	111	118	5	65490	65490	
<b>Total=</b>					<b>645075</b>	<b>645075</b>	<b>32519</b>

**Table 4. Year wise Production Plan**

<b>YEARWISE DEVELOPMENT AND PRODUCTION</b>								
<b>Year</b>	<b>Section</b>	<b>Bench</b>	<b>L (m)</b>	<b>W (m)</b>	<b>D (m)</b>	<b>Volume in (Cu.m.)</b>	<b>Reserve in Cbm (100%)</b>	<b>Topsoil in Cbm</b>
2023-2024	XY-AB	I	89	66	1			5874
		II	1	49	5			245
		III	88	60	5			26400
IV		150	84	5	63000	63000		
2024-2025		V	171	106	5	90630	90630	
		VI	161	101	5	81305	81305	
2025-2026		VII	151	96	5	72480	72480	
		VIII	141	148	5	104340	104340	
<b>Total=</b>						<b>411755</b>	<b>411755</b>	<b>32519</b>

## 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 have 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 Thuppuganapalli Village and other water will be sourced from nearby road tankers supply.

**Table 5. Water Balance**

Purpose	Quantity	Source
Drinking Water	1.0 KLD	Packaged Drinking water vendors are available in Athimugam which is about 1.65 Km East of the area.
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
<b>Total</b>	<b>2.0 KLD</b>	

## 8. Manpower

Total manpower required for the project is approximately 18 persons. The 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 / Labours	5 Nos
		Cleaners	3Nos
		Office Boy	1No
4.	Management & Supervisory staff		3No.
	<b>Total</b>		<b>18Nos</b>

## 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. No	Extent in Ha	GO No. & Date	Lease Period
1.	M/s.Sumukha 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.	Thiru.V.Nagaraja S/o.Venkatappa reddy.	Venkatesapuram village & Shoolagiri Taluk	287/1	2.16.0	Rc.No. 478/2018/ Mines Dated: 28.05.2018	19.02.2021 to 18.02.2031

## 2) Details of abandoned/Old Quarries:

S. No.	Name of the lessee	Village	S.F. No	Extent in Ha	GO No. & Date	Lease period
1.	Thiru.S.Rajendiran, S/o.Sengodan	Venkatesapuram/ Shoolagiri	288	5.00.0	Rc.214/2008/ mines-2 dated 30.07.2008	30.07.2008 to 29.07.2018
2.	Thiru.N.Muniraj	Venkatesapuram/ Shoolagiri	285 (Part)	5.00.0	Rc.123/2008/ Mines-2 dated 19.05.2008	04.07.2018 to 03.07.2023

## 3) Details of Proposed Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	-----Nil-----						

The Total extent of the Existing / Lease expired / Proposed quarries is 5.91.0 Ha.

## 10. Land Requirement

The total extent area of the project is 3.75.0 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.	Area under quarrying	1.79.0	3.40.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.01.0
4.	Green Belt	Nil	0.33.0
5.	Unutilized	1.95.0	Nil
	<b>Total</b>	<b>3.75.0 Ha</b>	<b>3.75.0 Ha</b>

## 11. Human Settlement

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

**Table 10 Habitation**

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Mensandoddi	220	0.5Kms
2	East	Athimugam	300	2.0Kms
3	South	Bukkasagaram	290	4.0kms
4	West	Venkateshapuram	280	2.5Kms

## 12. Power Requirement

The Rough Stone Quarry project does not require huge water and electricity for the project.

16 Litres 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 scenarios 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°C
- iii) Average Annual Rainfall of the area: 968 mm

### **13.2 Air Environment**

Ambient air monitoring was carried out on a 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 (PM<sub>10</sub>), Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>) were monitored, and the results are summarized below.

The baseline levels of PM<sub>10</sub> (33-63 µg/m<sup>3</sup>), PM<sub>2.5</sub> (13-33 µg/m<sup>3</sup>), SO<sub>2</sub> (5-21 µg/m<sup>3</sup>), NO<sub>2</sub> (12-41 µg/m<sup>3</sup>), 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 – 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 show 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 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 the 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.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%	1875
<b>Total</b>		<b>1875</b>

#### 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. 6,26,40,000/-** 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**

<b>S. No.</b>	<b>Description</b>	<b>Cost</b>
1	Fixed Asset Cost	Rs.5,86,40,000/-
2	Operational and Fencing Cost	Rs. 40,00,000/-
	<b>Total</b>	<b>Rs. 6,26,40,000/-</b>



Environmental Management Plan Cost is about **Rs.3,37,31,078/-** for 10 years.

## **20. Corporate Environmental Responsibility**

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

**Table 13 CER Cost**

<b>S.No.</b>	<b>CER Activity</b>	<b>CER value (Rs)</b>
1.	Provision of Smart Classrooms, Environmental awareness books in Library for Students, Green belt development, Toilet rooms and maintenance of Toilet rooms up to lease period in PUP School, Menasandoddi, Shoolagiri Union, Athimugam.	5,00,000/-
<b>Total</b>		<b>5,00,000/-</b>

## **21. Benefits of the Project**

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