

**August 2023**

**Executive Summary**

**Thiru.K.Jeeva Rough stone quarry- 4.50.0 Ha**

For

**PUBLIC HEARING**

At

**S.F Nos : 209(Part) of Alur Village, Hosur Taluk,  
Krishnagiri District, Tamil Nadu**

**PROJECT PROPONENT**

**Thiru.K.Jeeva,  
S/o.K.R.Kandasami,  
D.No.20/1, Viveks Apartment,  
1<sup>st</sup> Main Road, 1<sup>st</sup> Block,  
Anna Nagar East,  
Chennai-600102**

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

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



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

## EXECUTIVE SUMMARY

### 1. Project Background:

The Proposed project total extent area is 4.50.00 Ha, It is a government Poramboke land in S.F.No.209 (Part) of Alur Village, Hosur Taluk, and Krishnagiri District. The category of project is B1, It is a Rough stone quarry in Alur village. The area is situated on hilly terrain area sloping towards western side 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 method using shot-hole drilling and smooth blasting. Rough stone is removed by using hydraulic excavators. proposed bench height is 7 m and bench width is 5 m. The thickness of topsoil in this area is 2.0 m .

The quarry operation is proposed up to depth of 43 m-topsoil 1.0 m + Rough stone 42 m (surface ground level above height is 10 m and surface ground level below depth is 33 m ). The total Geological Resources is about 2133096 m<sup>3</sup> of Rough stone and 50061 m<sup>3</sup> of Top soil . The Mineable Reserves and proposed yearwise production is carried out 1589247 m<sup>3</sup> of Rough stone and top soil of 45712 m<sup>3</sup> to be mined for 5 years. The precise area letter and relevant mining laws in force. Mining Plan was approved by The Assistant Director, Department of Geology and Mining, Krishnagiri District vide letter Rc.No.216/2019/Mines dated 09.03.2021. Precise Area Communication letter was issued by the District Collectorate, Department of Geology and Mining, Krishnagiri vide Letter No. Na.Ka. En.216/2019/Kanimam 13.06.2019

The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, wild life sanctuaries as per Wild life protection Act 1972, within the radius of 15Km.

## 2. NATURE & SIZE OF THE PROJECT

The Existing Rough Stone Quarry over an extent of 4.50.00 Hectares land is located at Alur Village, Hosur Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone Quarry  
 District : krishnagiri  
 Taluk : Hosur  
 Village : Alur  
 S. F. Nos. :209 (Part)  
 Extent : 4.50.00 Hectares

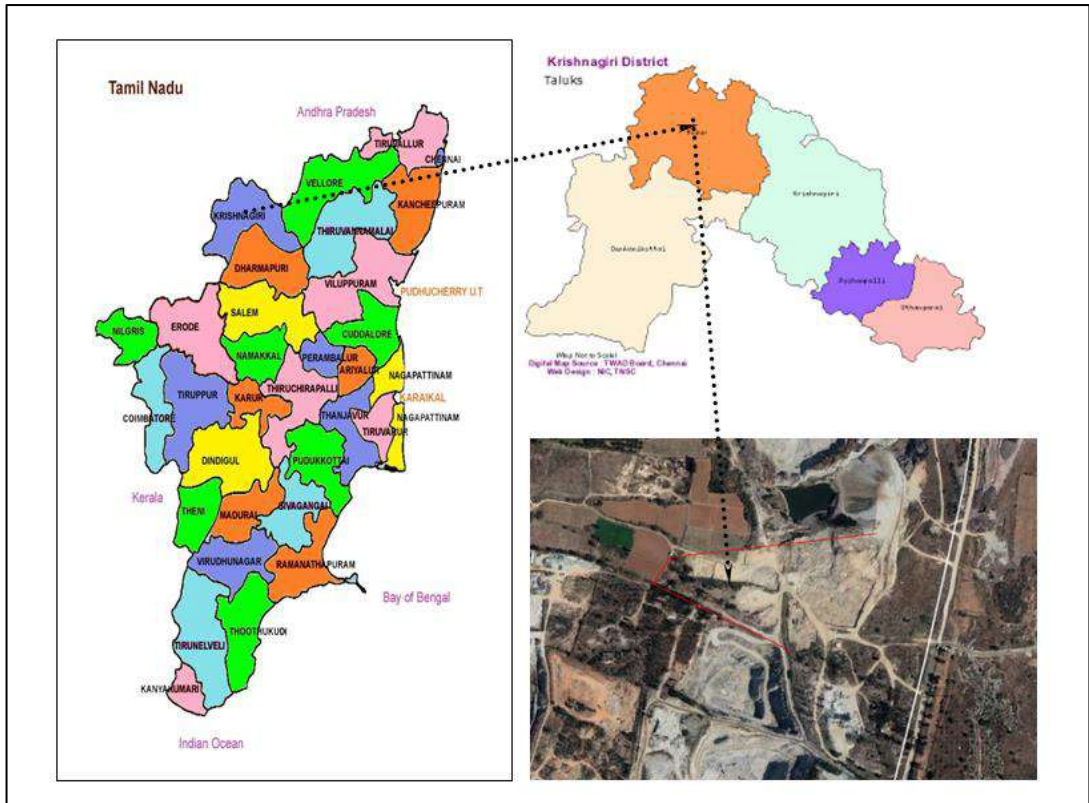
**Table 1: Brief Description of the Project**

S. No	Particulars	Details
1	Latitude	Latitude : 12° 44' 05.64" N to 12° 44' 03.03" N
2	Longitude	Longitude : 77° 55' 03.65" E to 77° 54' 51.35" E
3	Site Elevation above MSL	847 m from MSL
4	Topography	Hilly terrain topography
5	Land use of the site	Government Poramboke
6	Extent of lease area	4.50.00 Ha
7	Nearest highway	NH-7, Bangalore to Krishnagiri , 3.2 km, SSE
8	Nearest railway station	Hosur Railway Station – 6.15 km, SE
9	Nearest airport	Kampegowda International Airport – 40 km, W
10	Nearest town / city	<ul style="list-style-type: none"> <li>• Town - Hosur - 10 Km, W</li> <li>• City - Hosur - 10 Km, W</li> <li>• District -Krishnagiri – 40Km, SSW</li> </ul>
11	Rivers / Canal	<ul style="list-style-type: none"> <li>• Ponnaiyar River, 11.86 km, NE</li> </ul>
12	Lake	<ul style="list-style-type: none"> <li>❖ Peddakullu lake-2.74 km, NW</li> <li>❖ Muthali lake-3.14 km, NNW</li> <li>❖ Thamayanapalli lake-3.26 km, SW</li> <li>❖ Thummanapalli lake-3.58 km,SSE</li> <li>❖ Bukkasagaram lake-3.70 km, ESE</li> <li>❖ Doripalli lake-5.26 km, SE</li> <li>❖ Kamandoddi lake-5.56 km, SE</li> <li>❖ Kamandoddi old lake-6.43 km,SE</li> <li>❖ Konerapalli lake-8.41 km,SE</li> <li>❖ Chappadi lake-9.40 km, SE</li> <li>❖ Achettapalli lake-11.24 km,SW</li> <li>❖ Karapalli lake-7.67 km, SW</li> <li>❖ Tippalam lake-5.64 km, SW</li> <li>❖ Kumudapalli lake-4.46 km, SW</li> </ul>

		<ul style="list-style-type: none"> <li>❖ Bathlapalli lake-6.20 km, WSW</li> <li>❖ Alasanatham lake-8.48 km, W</li> <li>❖ Moranapalli lake-5.51 km, W</li> <li>❖ Budde raya guntae pond-12.96 km, WSW</li> <li>❖ Chandramkudi Eri-1066 km, W</li> </ul> <p><b>Dam:</b></p> <ul style="list-style-type: none"> <li>➤ Kelavarapalli dam-5.70 km, NW</li> </ul> <p><b>River:</b></p> <ul style="list-style-type: none"> <li>➤ Ponnaiyar river-1.80 km, W</li> </ul>
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"> <li>❖ Perandapalli RF-1.09 km, SSW</li> <li>❖ Sanamavu RF-4.08 km, S</li> </ul>
17	Seismicity	Proposed Lease area comes under Seismic zone-II
18	Defense Installations	Nil

## 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**

<b>GEOLOGICAL RESERVES</b>								
<b>Section</b>	<b>Bench</b>	<b>Length in (m)</b>	<b>Width in (m)</b>	<b>Depth in (m)</b>	<b>Volume In M3</b>	<b>Geological Reserves in m3 @ 95%</b>	<b>Mine waste in m3 @ 5%</b>	<b>Top Soil in m3</b>
XY-AB	I	203	123	1				24969
	II	203	123	7	174783	166044	8739	
	III	203	123	7	174783	166044	8739	
	IV	203	123	7	174783	166044	8739	
	V	203	123	7	174783	166044	8739	
	VI	203	123	7	174783	166044	8739	
	VII	203	123	7	174783	166044	8739	
<b>TOTAL</b>					<b>1048698</b>	<b>996264</b>	<b>52434</b>	<b>24969</b>
XY-CD	I	123	204	1				25092
	II	100	204	7	142800	135660	7140	
	III	123	204	7	175644	166862	8782	
	IV	123	204	7	175644	166862	8782	
	V	123	204	7	175644	166862	8782	
	VI	123	204	7	175644	166862	8782	
	VII	123	204	7	175644	166862	8782	
	VIII	123	204	7	175644	166862	8782	
<b>TOTAL</b>					<b>1196664</b>	<b>1136832</b>	<b>59832</b>	<b>25092</b>
<b>GRAND TOTAL</b>					<b>2245362</b>	<b>2133096</b>	<b>112266</b>	<b>50061</b>

**Table 3. Mineable Resources**

<b>MINEABLE RESERVES</b>								
<b>Section</b>	<b>Bench</b>	<b>Length in (m)</b>	<b>Width in (m)</b>	<b>Depth in (m)</b>	<b>Volume In M3</b>	<b>Geological Reserves in m3 @ 95%</b>	<b>Mine waste in m3 @ 5%</b>	<b>Top Soil in m3</b>
XY-AB	I	196	119	1				23324
	II	195	118	7	161070	153017	8053	
	III	190	113	7	150290	142776	7514	
	IV	185	108	7	139860	132867	6993	
	V	180	103	7	129780	123291	6489	
	VI	175	98	7	120050	114048	6002	
	VII	170	93	7	110670	105137	5533	
<b>TOTAL</b>					<b>811720</b>	<b>771136</b>	<b>40584</b>	<b>23324</b>
XY- CD	I	116	193	1				22388
	II	92	192	7	123648	117466	6182	
	III	110	192	7	147840	140448	7392	
	IV	105	187	7	137445	130573	6872	
	V	100	182	7	127400	121030	6370	
	VI	95	177	7	117705	111820	5885	
	VII	90	172	7	108360	102942	5418	
	VIII	85	166	7	98770	93832	4938	
<b>TOTAL</b>					<b>861168</b>	<b>818111</b>	<b>43057</b>	<b>22388</b>
<b>GRAND TOTAL</b>					<b>1672888</b>	<b>1589247</b>	<b>83641</b>	<b>45712</b>

**Table 4. Year wise Production Plan**

<b>YEARWISE RESERVES</b>									
<b>Year</b>	<b>Section</b>	<b>Bench</b>	<b>Length in (m)</b>	<b>Width in (m)</b>	<b>Depth in (m)</b>	<b>Volume In M3</b>	<b>Rough stone Reserves in m3 @ 95%</b>	<b>Mine waste in m3 @ 5%</b>	<b>Top Soil in m3</b>
I- Year	XY-AB	I	196	119	1				23324
		II	195	118	7	161070	153017	8053	
		III	190	113	7	150290	142776	7514	
<b>TOTAL</b>						<b>311360</b>	<b>295793</b>	<b>15567</b>	<b>23324</b>
II- Year	XY- CD	I	116	193	1				22388
		II	92	192	7	123648	117466	6182	
		III	110	192	7	147840	140448	7392	
<b>TOTAL</b>						<b>271488</b>	<b>257914</b>	<b>13574</b>	<b>22388</b>
III- Year	XY-AB	III	185	108	7	139860	132867	6993	
		IV	180	103	7	129780	123291	6489	
<b>TOTAL</b>						<b>269640</b>	<b>256158</b>	<b>13482</b>	
IV- Year	XY- CD	IV	105	187	7	137445	130573	6872	
		V	100	184	7	127400	121030	6370	
<b>TOTAL</b>						<b>264845</b>	<b>251603</b>	<b>13242</b>	
V- Year	XY- CD	VI	95	177	7	117705	111820	5885	
		VII	90	172	7	108360	102942	5418	
<b>TOTAL</b>						<b>226065</b>	<b>214762</b>	<b>11303</b>	
<b>GRAND TOTAL</b>						<b>1343398</b>	<b>1276230</b>	<b>67168</b>	<b>45712</b>

## 6. MINING

### Opencast mining

Opencast method of semi mechanized mining is adopted to extract Rough Stone. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106 (2) (b) as above is seldom [possible due to various inherent petro genetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the



provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act-1952.

### 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 25.5mm 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	0.5 KLD	Packaged Drinking water vendors available in Attur Village which is about 1.3 km from N side of the area.
Green belt	0.5 KLD	From Hired Water Tanker.
Dust suppression	0.5 KLD	From Hired Water Tanker.
<b>Total</b>	<b>1.5 KLD</b>	

### 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		18Nos

## 9. Solid Waste Management

**Table 7 Solid Waste Management**

S. No	Type	Quantity	Disposal Method
1	Organic	7.2 kg/day	Municipal bin including food waste
2	Inorganic	10.8 kg/day	TNPCB authorized recyclers

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

**Table 8. 500m Radius Cluster Mine**

### 1) Existing other quarries:

S. No.	Name of the Owner	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
1	Tvl.Chennai Mines, 29 Ramesh Nagar, Thiruneermalai Road, West Tambaram, Chennai-600045	Alur Hosur Taluk	212/1	2.02.5	29.12.2018 to 28.12.2023
2	Tmt.B.G.Manjula, W/o. Late Baskar, No.77 E Indira Nagar, Bagalur Road, Hosur 635109	Alur Hosur Taluk	208/1	3.03.5	19.06.2019 to 18.06.2024

## 2) Details of abandoned /Old Quarries

S. No.	Name of the Owner	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
1	Tvl.Chennai Mines, 29 Ramesh Nagar, Thiruneermalai Road, West Tambaram, Chennai 600045	Alur	209(Part)	3.46.5	20.3.2015 to 19.3.2020
2	R.Prasannakumar, S/o. Thiru Ramiyan, 122 Thinnur Village, Perandapalli Post, Hosur taluk.	Alur	209/(part)	4.21.5	19.11.2010 to 18.11.2015
3	Thiru M.Durai, S/o.Mallagounder, 13/12B Santhi Nagar, Opp Ragavendra Teater, Hosur	Alur	207/1B	0.81.0	23.11.2009 to 23.11.2014

## 3) Details of Present Proposed quarries

S. No.	Name of the Owner	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
1	Thiru.K.Jeeva	Alur village, Hosur taluk	209(Part)	4.50.0	Instant Proposal

## 10. Land Requirement

The total extent area of the project is 4.50.00 Ha, government Poramboke Land in Village of Alur, Hosur Taluk, and Krishnagiri District.

**Table 9 Land Use Breakup**

SL. NO.	LAND USE	PRESENT AREA (HECT)	AREA IN USE DURING THE QUARRYING PERIOD (HECT)
1.	Area under Quarrying	Nil	3.87.0

2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.02.0
4.	Green Belt	Nil	0.60.0
5.	Unutilized	4.49.0	Nil
	<b>Total</b>	<b>4.50.0Ha</b>	<b>4.50.0Ha</b>

### 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**

SL. NO	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Attur	150	1.3
2	East	Bukkasagaram	700	2.0
3	South	Sundatti	450	1.2
4	West	Dasapalle	300	1.0

### 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 **1028611 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 5 km. radius, air quality survey has been conducted at 5 locations. Major air pollutants like Particulate Matter (PM10), Sulphur Dioxide (SO<sub>2</sub>), and Nitrogen Dioxide (NO<sub>2</sub>) were monitored and the results are summarized below.

The baseline levels of PM<sub>10</sub> (35- 67 µg/m<sup>3</sup>), PM<sub>2.5</sub> ( 12- 34 µg/m<sup>3</sup>), SO<sub>2</sub> (5-22 µg/m<sup>3</sup>), NO<sub>2</sub>(10-43 µg/m<sup>3</sup>), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from March to May 2023.

### **13.3 Noise Environment**

The maximum Day noise and Night noise were found to be 65 dB(A) and 55dB(A) respectively in Government higher secondary school, Bukkasagaram. The minimum Day Noise and Night noise were 45 dB(A) and 35 dB(A) respectively which was observed in Anganwadi centre and Project site. The observed values are all well within the Standards prescribed by CPCB.

### **13.4 Water Environment**

- The average pH ranges from 7.34 to 8.1.
- TDS value varied from 505 mg/l to 1015 mg/l
- Hardness varied from 252 to 717 mg/l
- Chloride varied from 71.3 to 223 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 6.21 to 9.26 with organic matter 0.12 to 0.83 %. 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 a Government Poramboke 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 650 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

**Table.11. Plantation/ Afforestation Program**

<b>Name of species proposed</b>	<b>Survival</b>	<b>No of species</b>
Neem, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Thethankottai Maram, Pungam	80%	2250
<b>Total</b>		<b>2250</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 5,16,80,000/-** 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	Rs.4,86,80,000/-
2	Operational cost	Rs.30,00,000/-
	<b>Total</b>	<b>Rs.5,16,80,000/-</b>

**Table 13 EMP**

S.No.	Categories	Capital cost	Recurring cost
1	Air Environment	215000	232500
2	Noise Environment	50000	1168640
3	Water Environment	45000	5000
4	Waste Management	6000	7000
5	Implementation of EC, Mining plan & DGMS Condition	816000	373000
6	Green belt development	585000	67500
		<b>1717000</b>	<b>1853640</b>
	<b>Total</b>	<b>Rs.35,70,640</b>	



Year 1	Year 2	Year 3	Year 4	Year 5
3570640	1946322	2043638	2145820	2253111
Year 6	Year 7	Year 8	Year 9	Year 10
3224267	2484055	2608258	2738671	2875604

EMP cost for 10 years (Year 1 to Year 10) =Rs.25890385=Rs.289 lakhs

## 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	CER value (Rs)
1.	Panchayat Union Middle School, Alur village, Hosur taluk, Krishnagiri District Provision of <ul style="list-style-type: none"> <li>➤ Roof sheet for student dining</li> <li>➤ Wooden round table for students</li> <li>➤ Wooden benches for primary students</li> <li>➤ Ceiling fan</li> <li>➤ Incinerator</li> <li>➤ Office table</li> <li>➤ Smart board with projector</li> <li>➤ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture.</li> </ul>	5,00,000
<b>Total</b>		<b>5,00,000</b>

## 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.