

**NOVEMBER**

**2022**

**Executive Summary for Conducting Public Hearing  
FOR**

**“M/s.S.S.V.Blue Metals Prop: Thiru.R.Rajasekaran  
Rough Stone Quarry over a total extent of 2.50.0 Ha”**

**At**

**S.F.No. 603/1 (Part-A) of Panchakshipuram Village,  
Hosur Taluk, Krishnagiri District, Tamilnadu State**

**Project Proponent:**

**M/s.S.S.V.Blue Metals,  
Prop - Thiru.R.Rajasekaran,  
S/O. Ramasubbu,  
No. 89, Thally Hudco,  
Hosur Taluk,  
Krishnagiri District**

**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,**

**Pallikarani**

**Chennai -600100**

## EXECUTIVE SUMMARY

### 1. Project Background:

The Proposed Rough stone quarry project total extent area is 2.50 Ha in S.No 603/1(Part-A) of Panchakshipuram Village of Hosur Taluk, Krishnagiri District. It is a existing quarry. The lease area applied for quarry lease is undulating terrain with gentle sloping towards Eastern side covered with Rough stone and the project comes under B1 category.

The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 6.0 meter vertical bench with a bench width of 5.0 meter. Quarrying operation is carried out Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to needy Crusher. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.

The quarry operation is proposed up to depth for 50m (1m top soil + 50m Rough stone) 5m Above surface ground level and 86m below surface level. The Total Geological reserve is about 977896 m<sup>3</sup> of Rough Stone. The Mineable Reserves and Proposed Yearwise production is carried out 466694 m<sup>3</sup> of Rough stone to be mined for (Sixty months) Five years only.

Precise area communication letter received from the the District Collector Krishnagiri Rc.No.182/2018/kanimam dated 09.03.2018. Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Rc.No.G.M.182/2018/Mines dated 20.08.2018. The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, wild life sanctuaries as per Wild life protection Act 1972, within the radius of 15Km.

The project does not require huge amount water for quarry operation and total water requirement is 2.0 KLD. (0.5 KLD) Drinking water use only Packaged drinking water is available from the nearby approved water vendors and (1.0 KLD) and (0.5 KLD) of water use only road tankers supply in Panchakshipuram Village which is about  $\approx$  1.62 Km-W it will also sourced from tank water suppliers. The project cost is about Rs. 1,12,65,000/- ( One Crores Twelve lakhs and sixty five thousand rupees only).

## 2. Nature & Size of the Project

The Existing Rough Stone Quarry over an extent of 2.50.0 Hectares land is located at Panchakshipuram Village of Hosur Taluk, Krishnagiri District .

Mineral intends to quarry	: Rough stone
District	: Krishnagiri
Taluk	: Hosur
Village	: Panchakshipuram
S. F. Nos.	: 603/1(Part-A)
Extent	: 2.50.0 Hectares

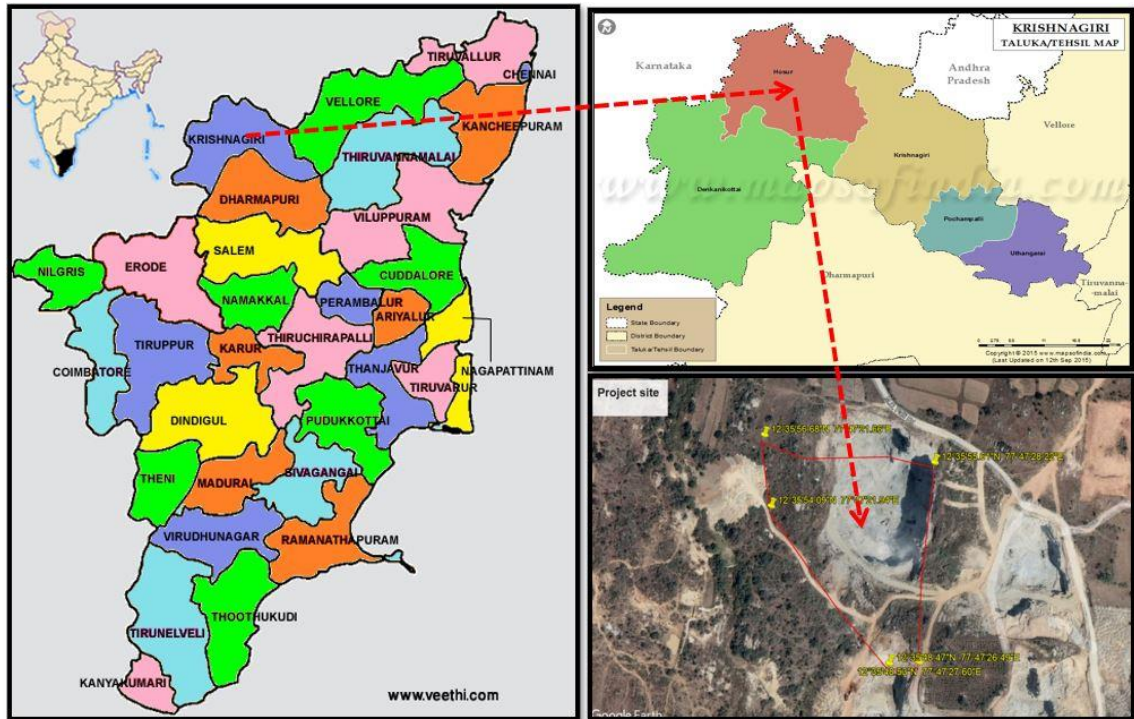
**Table 1: Brief Description of the Project**

S. No	Particulars	Details
1	Latitude	12°35'48.48"N to 12°35'56.64"N
2	Longitude	77°47'21.61"E to 77°47'28.27"E
3	Site Elevation above MSL	856m from MSL
4	Topography	Undulating terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	2.50.0 Ha
7	Nearest highway	SH-17A Hosur to Denkanikottai is about 1.01 Km on West of the area
8	Nearest railway station	Hosur Railway Station – 13.62 km, NE
9	Nearest airport	Kempegowda International Airport Bengaluru - Airport – 66.12 km, NW
10	Nearest town / city	Town - Hosur - 14.02 Km -NE City - Hosur - 15.00 Km -NE District – Krishnagiri - 46.12 Km - SE

11	Rivers / Canal	Nil in 15 km radius
12	Lake	<ul style="list-style-type: none"> <li>❖ Nanjappan Kodigai Eri – 6.94 km E</li> <li>❖ Vasa Lake – 5.2 km N</li> <li>❖ Vannama lake – 11.34 km SW</li> <li>❖ Rama Naicken lake – 14.34 km NE</li> <li>❖ Tahally lake – 14.41 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>❖ Udedurgam R.F – 12.24 Km SE</li> <li>❖ Denkanikottai R.F – 9.17 km SE</li> <li>❖ Sanamavu Forest – 11.21 km NE</li> </ul>
17	Seismicity	Proposed Lease area come under Seismic zone-II

### 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 and Gravel 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. The area is mainly composed of Archaean Crystalline Metamorphic Complex. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock. The general trend of formation is E-W dip S 600.

#### 5. Geological Resources

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

Geological Resources is estimated at 1029364 m<sup>3</sup> of Rough stone.

**Table 2. Geological resources**

GEOLOGICAL RESERVES								
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	13	79	1				1027
	II	13	79	7	7189	6830	359	
	III	13	79	7	7189	6830	359	
	IV	13	114	7	10374	9855	519	
	V	92	188	7	121072	115018	6054	
	VI	92	188	7	121072	115018	6054	

	VII	92	188	7	121072	115018	6054	
	VIII	92	188	7	121072	115018	6054	
<b>TOTAL</b>					<b>509040</b>	<b>483587</b>	<b>25453</b>	<b>1027</b>
XY-CD	I	77	50	1				3850
	II	77	50	2	7700	7315	385	
	III	77	50	7	26950	25603	1347	
	IV	77	50	7	26950	25603	1347	
	V	127	129	7	114681	108947	5734	
	VI	127	129	7	114681	108947	5734	
	VII	127	129	7	114681	108947	5734	
	VIII	127	129	7	114681	108947	5734	
<b>TOTAL</b>					<b>520324</b>	<b>494309</b>	<b>26015</b>	<b>3850</b>
<b>GRAND TOTAL</b>					<b>1029364</b>	<b>977896</b>	<b>51468</b>	<b>4877</b>

**Table 3. Year wise Production Plan**

<b>YEARWISE DEVELOPMENT AND PRODCUTION RESERVES</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 M3</b>	<b>Recoverable Reserve in m3 @ 95%</b>	<b>Mine waste in m3 @ 5%</b>	<b>Top Soil in m3</b>
I- YEAR	XY-AB								
		I	1	60	1				60
		II	1	59	7	413	392	21	
		III	1	54	7	378	359	19	
		IV	1	84	7	588	559	29	
		V	79	148	7	81844	77752	4092	
<b>TOTAL</b>						<b>83223</b>	<b>79062</b>	<b>4161</b>	<b>60</b>

II-YEAR	XY-CD	I	61	26	1				1586
		II	60	24	2	2880	2736	144	
		III	60	24	7	10080	9576	504	
		IV	55	19	7	7315	6949	366	
		V	99	93	7	64449	61227	3222	
	<b>TOTAL</b>					<b>84724</b>	<b>80488</b>	<b>4236</b>	<b>1586</b>
III-YEAR	XY-AB								
	XY-CD	VI	74	138	7	71484	67910	3574	
		VI	94	83	7	54614	51883	2731	
<b>TOTAL</b>					<b>126098</b>	<b>119793</b>	<b>6305</b>		
IV-YEAR	XY-AB								
	XY-CD	VII	69	128	7	61824	58733	3091	
		VII	89	73	7	45479	43205	2274	
<b>TOTAL</b>					<b>107303</b>	<b>101938</b>	<b>5365</b>		
V-YEAR	XY-AB								
	XY-CD	VIII	64	118	7	52864	50221	2643	
		VIII	84	63	7	37044	35192	1852	
<b>TOTAL</b>					<b>89908</b>	<b>85413</b>	<b>4495</b>		
<b>GRAND TOTAL</b>					<b>491256</b>	<b>466694</b>	<b>24562</b>	<b>1646</b>	



## 6. Mining

### Opencast mining

Opencast method of mechanized mining is adopted to extract Rough Stone. Machineries like Tractor mounted compressor attached with Jack hammers is being used to drilling and Proposed Control area. Excavators are operated for quarrying of Rough Stone and Tippers / Lorries are used for transportation of Rough Stone to the destination.

#### Process Description

- The reserves and resource are arrived based upon the Geological investigation
- Removal of Gravel by Excavators and directly Loaded into Tippers.
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer of 25.5 mm 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 Peraiyur Village and other water will be source from nearby road tankers supply.

**Table 4. Water Balance**

Purpose	Quantity	Sources
Drinking Water	1.0KLD	Packaged Drinking water vendors available in Panchakshipuram village which is about $\approx$ 1.62 km, W from the project site.
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
<b>Total</b>	<b>2.0 KLD</b>	

## 8. Manpower

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

**Table 5. Man Power**

	Skilled	Operator	2
		Mechanic	1
		Blaster/Mat	1
	Semi skilled	Driver	2
	Unskilled	Musdoor/Labours	5
		Office boy	1
		Cleaners	3
	Management & Supervisory staff		3
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**

(i) Details of Existing quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.M.R.Enterprises Panchakshipuram, Hosur taluk, Krishnagiri District	Hosur taluk- Panchakshipuram Village	603/1(Part-2)	3.00.0	Roe.No.92/2016/Mines  Dt:08.08.2016	17.08.2016 to 16.08.2022
2	Thiru. P.Kalaikovan, S/o M.Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk & District	Hosur taluk- Panchakshipuram Village	603/1(Part-3)	3.25.0	Roe.No.93/2016/Mines  Dt:04.06.2018	13.06.2018 to 12.06.2028
3	Thiru.K.gopinath S/o.Kothnada ramaiah	Hosur taluk- Panchakshipuram Village	603/1(Part-B)	2.50.0	Roe.No.183/2018/Mines  Dt:06.12.2016	06.12.2019 to 05.12.2029
4	Thiru B.Arun kumar	Hosur taluk- Panchakshipuram Village	603/1(Part-4)	3.00.0	Roe.No.94/2016/Mines  Dt:19.12.2016	26.12.2016 to 25.12.2026
			Total	11.75.0		

(ii) Details of abandoned/old quarries.

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	R.Ramareddy	Panchakshipuram Village Hosur taluk	545/1,2,3 & 628	2.15.5	Roe.245/2010	28.2.2011 to 27.2.2016 Lease expired
2	Tvl.Veera badraswamy	Panchakshipuram Village Hosur taluk	627	1.45.5	Roe.79/212 Mines Dt.26.04.2012 and 23.12.2013	03.01.2014 to 02.01.2019 lease expired
3	B.Gowdappa	Panchakshipuram Village Hosur taluk	603/1 (Part-I)	5.00.0	Roe.583/2005 Mines dated 18.6.2005	8.8.2005 to 7.8.2015 lease expired
4			Total	8.61.0		

**(iii) Details of proposed quarries**

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.S.S.v.Blue Metals, Prop.Thiru R.rajasekaran, S/o Ramasubbu, Prop.S.S.v Blue Metal, No.89 Thally Hudco, Hosur Taluk, Krishnagiri	Panchakshipuram Village Hosur taluk	603/1(Part-A)	2.50.0	Roc.182/2018 mines dated 09.03.2018	Precise area Instant Proposal

2	Thiru S.G.Anandha Kumar	Panchakshipuram Village Hosur taluk	738	3.96.5	Roc.1077/2018 mines dated 04.2.2019	Precise area given
3			Total	6.46.5		

**(iv) Details of applied area**

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Remarks
Nil	Nil	Nil	Nil	Nil	Nil	Nil

**10. Land Requirement**

The total extent area of the project is 2.50.0 Ha, Patta land in Panchakshipuram Village, Hosur Taluk, Krishnagiri District .

**Table 8 Land Use Breakup**

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarrying pit	1.40.0	1.86.3
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.02.0
4.	Green Belt & dump	Nil	0.60.7
5.	Unutilized	1.09.0	Nil
	<b>Total</b>	<b>2.50.0 Ha</b>	<b>2.50.0 Ha</b>

**11. Human Settlement**

There are no habitations within 500m radius. There are villages located in this area within 5km radius of the quarry.

**Table 9 Habitation**

<b>Direction</b>	<b>Village</b>	<b>Distance in Kms</b>	<b>Population</b>
North	Machinayakanapalli	1.85 Kms	200
East	Nagappan Agraharam	1.5 Kms	220
South	Jagirkarupalli	1.8 kms	250
west	Panchakshipuram	1.5 Kms	230

## **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.

**10 Litre** diesel per hour for excavating for mining and loading for gravel 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 : 18 to 23 °C
- ii) Average Maximum Temperature : 30 to 40 °C
- iii) Average Annual Rainfall of the area : 821 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 (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> (64-41 µg/m<sup>3</sup>), PM<sub>2.5</sub> (31-18 µg/m<sup>3</sup>), SO<sub>2</sub>(14-5 µg/m<sup>3</sup>), NO<sub>2</sub> (29-10µg/m<sup>3</sup>), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from May to July 2022.

### **13.3 Noise Environment**

Ambient noise levels were measured at 5 locations around the proposed project site. The maximum Day noise and Night noise were found to be 61 dB(A) and 38 dB(A) respectively in Vanamangalam, . The minimum Day Noise and Night noise were 38 dB(A) which was observed in project site.

### **13.4 Water Environment**

- The average pH ranges from 7.12 – 7.98.
- TDS value varied from 596 mg/l to 774 mg/l
- Hardness varied from 200 to 554 mg/l
- Chloride varied from 31.3 to 82.2 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 6.80 to 7.92 with organic matter 2.7 to 3.6 %. 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 Patta 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. 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, Panai, Vilvam, etc. will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 140 trees per annum with interval 5m.
4. The rate of survival expected to be 70% in this area

**Table.10 Plantation/ Afforestation Program**

Name of species proposed	Survival	No of species
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Neem, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Thethankottai Maram, Pungam, Vanni maram	70%	1100
<b>Total</b>		<b>1100</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 equipment 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 this 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 1,09,40,000/-** 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 .11 Project Cost details**

S. No.	Description	Cost
1	Fixed Asset Cost	89,40,000/-
2	Operational Cost	20,00,000/-
	<b>Total</b>	<b>1,09,40,000/-</b>

Environmental Management Cost :- **23,36,000/-**

### 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.	<p>1. Government Higher Secondary School</p> <p>Provision of</p> <ul style="list-style-type: none"> <li>➤ Solar powered smart class,</li> <li>➤ Infrastructure,</li> <li>➤ Environmental books for library (in Tamil language),</li> <li>➤ Greenbelt facilities and</li> </ul>	5,00,000

	➤ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture.	
<b>Total</b>		<b>5,00,000</b>

### 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.