

NOVEMBER

2022

**Executive Summary for Conducting Public Hearing
FOR**

**“M/s.R.V.Enterprises Rough Stone Quarry over a
total extent of 2.40.0 Ha”**

At

**S.F.No. 232/2 (Part) of Mugalur Village, Shoolagiri
Taluk, Krishnagiri District, Tamilnadu State**

Project Proponent:

M/s.R.V.Enterprises,
Partner - M.Ramamoorthy,
S/o. Muthappa,
No.1/16, Machiyakanpalli village,
Panchakshipuram post, Hosur Taluk,
Krishnagiri District – 635 110

Project termed under schedule 1(a) Category B₁

Prepared By:

Ecotech Labs Pvt. Ltd.



NABET Accredited EIA Consultant

**48, 2nd Main Road, Ram Nagar South Extension,
Pallikarani
Chennai -600100**

EXECUTIVE SUMMARY

1. Project Background:

The Proposed project total extent area is 2.40.0 Ha, Government Poramboke land in Mugalur Village of shoolagiri Taluk, krishnagiri District. The category of project is B1, It is a Rough stone quarry in Mugalur village. The area is situated on Plain terrain sloping towards Northern 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 7.0-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. The Total Geological reserve is about 1089179m³ of Rough Stone. The Mineable Reserves of Rough stone is 503487m³. The year wise production/recoverable resources of rough stone for 5 years are 427630m³.

Mining Plan was approved by The Deputy Director, Geology & Mining, Krishnagiri vide Rc.No.G.M.220/2019/Mines dated :30.07.2019. The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, wildlife sanctuaries as per Wildlife protection Act 1972, within the radius of 15Km.

2. Nature & Size of the Project

The Rough Stone Quarry over an extent of 2.40.0 Hectares land is located Perumanadu Village of Illuppur Taluk, Pudukkottai District.

Mineral intends to quarry	: Rough stone
District	: Krishnagiri
Taluk	: Shoolagiri
Village	: Mugalur
S. F. Nos.	: 232/2 (Part)
Extent	: 2.40.0 Hectares

Table 1: Brief Description of the Project

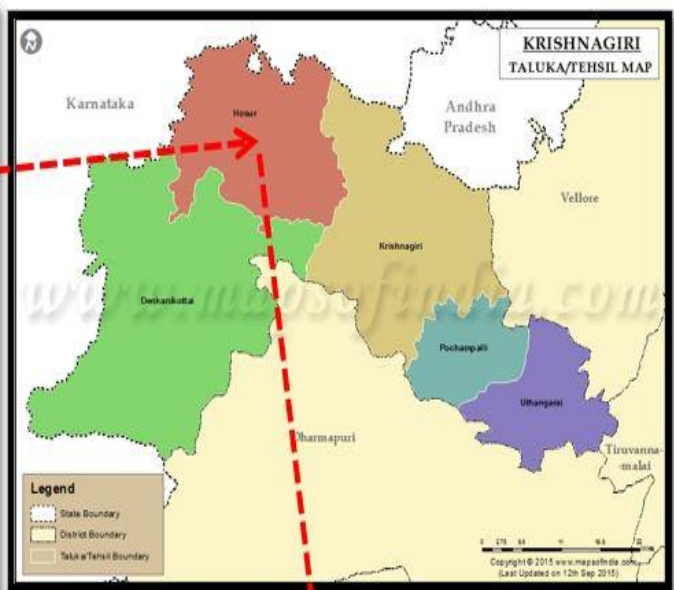
S. No	Particulars	Details
1	Latitude	12°37'25.9249"N to 12°37'23.5847"N
2	Longitude	77°48'56.4872"E to 77°48'49.2256"E
3	Site Elevation above MSL	873m from MSL
4	Topography	Plain terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	2.40.0 Ha
7	Nearest highway	SH 17A – Hosur to Denkanikottai – 3.5 km, W
8	Nearest railway station	Hosur Railway Station – 10.40 km, NE
9	Nearest airport	Hosur Airport – 7.0 km, NW Kempegowda International Airport – 64.69km, NW
10	Nearest town / city	Town - Kelamangalam - 4.13 Km -SE City - Hosur - 12.7 Km -N District – Krishnagiri - 46.12 Km - SE E
11	Rivers / Canal	<ul style="list-style-type: none"> • Nil within 15 km radius
12	Lake	<ul style="list-style-type: none"> • Nanjappan Kodigai Eri – 4.87 km SE • Vasa Lake – 4.31 km NW • Vannama lake – 15.21 km SW • Rama Naicken lake – 11.62 km NE • Tahally lake – 11.09 km 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	<ul style="list-style-type: none"> • Udedurgam R.F – 11.94 Km SE • Denkanikottai R.F – 11.04 km SE • Sanamavu Forest – 6.68 km NE • Cauvery North Wildlife Sanctuary – 22.11 Km - 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 and Gravel extracted will be transported to be Stone crusher of district Pudukkottai.
- ❖ 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



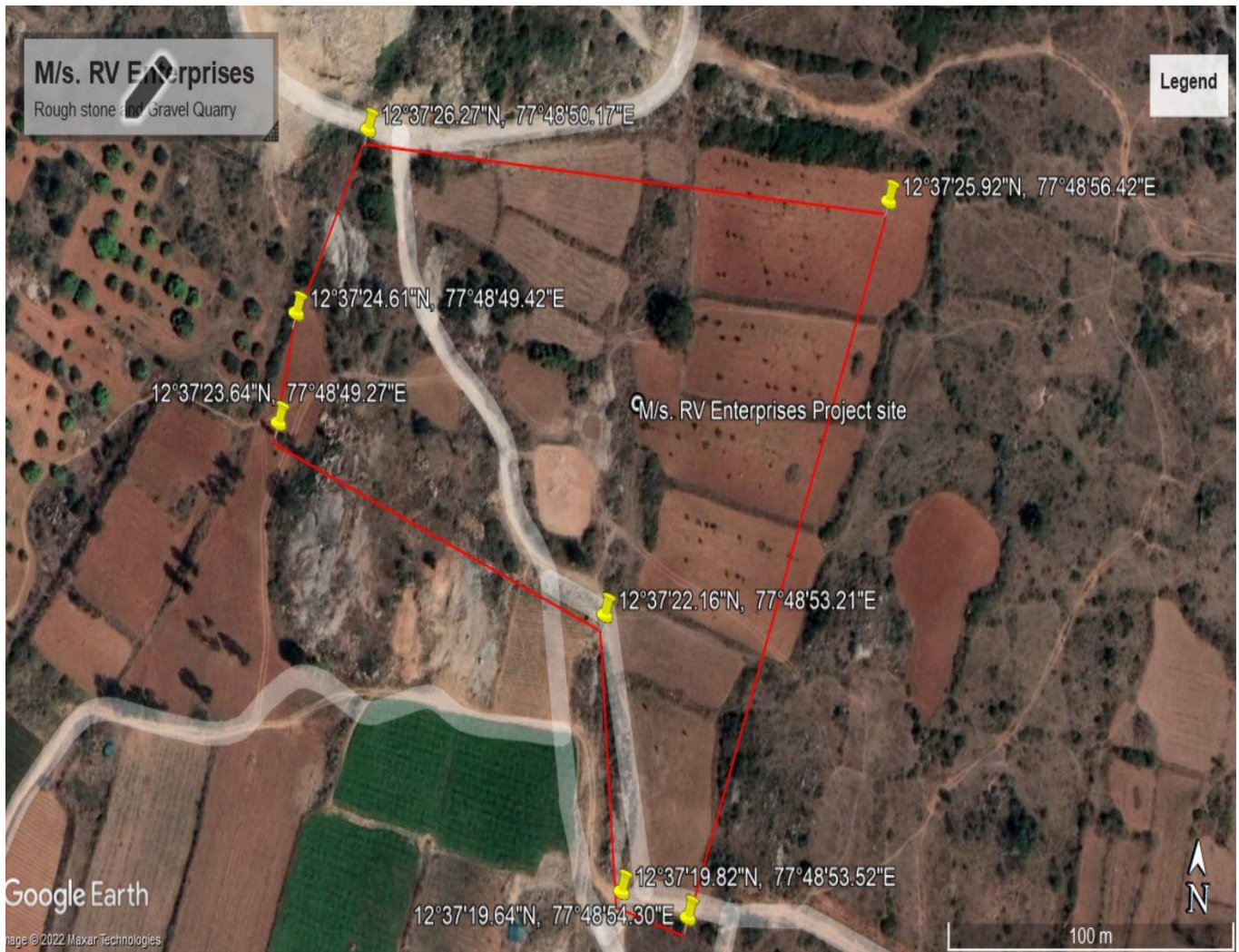


Figure 2: Google Image of the Project Site

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 reserve of Rough Stone and Topsoil is calculated upto a depth of 50m (1.0m Topsoil + 49m Rough Stone). Total Geological reserve estimated as 1146502 Cu.m by area cross sectional method.

Table 2. Geological resources

GEOLOGICAL RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M ³	Geological Rough stone Reserves in m ³ @ 95%	Mine waste in m ³ @ 5%	Top Soil in m ³
XY-AB	I	95	102	1				9690
	II	95	102	7	67830	64439	3391	
	III	95	102	7	67830	64439	3391	
	IV	95	102	7	67830	64439	3391	
	V	95	102	7	67830	64439	3391	
	VI	95	102	7	67830	64439	3391	
	VII	95	102	7	67830	64439	3391	
	VIII	95	102	7	67830	64439	3391	
TOTAL					474810	451073	23737	9690
XY-CD	I	92	149	1				13708
	II	92	149	7	95956	91158	4798	
	III	92	149	7	95956	91158	4798	
	IV	92	149	7	95956	91158	4798	
	V	92	149	7	95956	91158	4798	
	VI	92	149	7	95956	91158	4798	
	VII	92	149	7	95956	91158	4798	
	VIII	92	149	7	95956	91158	4798	
TOTAL					671692	638106	33586	13708
GRAND TOTAL					1146502	1089179	57323	23398

Table 3. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODCUTION RESERVES									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In m³	RESERVES in m³ @ 95%	Mine waste in m³ @ 5%	Top Soil in m³
I- YEAR	XY - AB	I	88	85	1				7480
		II	87	83	7	50547	48020	2527	
	XY - CD	I	82	132	1				10824
		II	81	130	7	73710	70025	3685	
	TOTAL						124257	118045	6212
II- YEAR	XY - AB	III	82	73	7	41902	39807	2095	
	XY - CD	III	76	120	7	63840	60648	3192	
	TOTAL						105742	100455	5287
III- YEAR	XY - AB	IV	77	63	7	33957	32259	1698	
	XY - CD	IV	71	110	7	54670	51937	2733	
	TOTAL						88627	84196	4431
IV- YEAR	XY - AB	V	72	53	7	26712	25376	1336	
	XY - CD	V	66	100	7	46200	43890	2310	
	TOTAL						72912	69266	3646
V- YEAR	XY - AB	VI	67	43	7	20167	19159	1008	
	XY - CD	VI	61	90	7	38430	36509	1921	
	TOTAL						89957	55668	4497
GRAND TOTAL						481495	427630	24073	18304

6.Mining

Opencast mining

The quarry operation is proposed to carry out with conventional open cast mechanized mining with 7.0-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 32mm Dia.
- Minimum Blasting With Class 2 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 Kottur Village and other water will be source from nearby road tankers supply.

Table 4. Water Balance

Purpose	Quantity	Source
Drinking Water	1.0KLD	Packaged Drinking water vendors available in Kottur village which is about 1.0 km NE from the project site.
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
Total	2.0 KLD	

8. Manpower

Total manpower required for the project is approximately 15 persons.

Workers will be from nearby villages.

Table 5. Man Power

	Skilled	Operator	2
		Mechanic	1
		Mines Manager/Mate	1
	Semi skilled	Driver	2
	Unskilled	Musdoor/Labours	4
		Office boy	1
		Cleaners	2
	Management & Supervisory staff		2
Total			15 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	2.7 kg/day	Municipal bin including food waste
2	Inorganic	4.05 kg/day	TNPCB authorized recyclers

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

Table. 7 500m Radius Cluster Mine

S. No	Name of the lessee	Village & Taluk	Mineral	S.F No	Extent (Ha)	G.O. No. & Date	Lease period
I. Existing Quarries							
1	Thiru.P.Nagaraja reddy, S/o.Pappi reddy, No.2/32, Balageri Village, Mudhuganapalli Post, Hosur Taluk, Krishnagiri Dist	Hosapuram Village & Denkanikottai Taluk	Rough stone	457/(P-1)	2.00.0	Roc. 111/2016/ Mines dated 08.08.2016	17.08.2016 to 16.08.2026

2	Thiru.P.Venkata Reddy, S/o. Pedha Obul Reddy, No.3/213 Periya Kodipalli Village, Kempatt, Muthur Post, Denkanikottai Taluk, Krishnagiri Dist	Hosapuram Village & Denkanikottai Taluk	Rough stone	457/(P-2)	3.70.0	Roc. 112/2016/ Mines dated 26.02.2020	26.02.2020 to 25.02.2030
3	Thiru.C.Venkatadri, Pothachandiram Village, Kundumaranapalli Post, Denkanikottai Taluk, Krishnagiri Dist	Mugalur Village & Denkanikottai Taluk	Rough stone	257/1A, 257/2A, 257/2B(P) 272/1A(P)	0.39.8 0.04.4 5 0.97.0 0.90.5 <hr/> 2.31.7 5	Roc.402/2017/Mines dated: 04.06.2018	13.06.2018 to 12.06.2023

II. Abandoned / Old Quarries

S. No.	Name of the lessee	Village & Taluk	S.F No	Extent (Ha)	G.O. No. & Date	Lease period
1	Thiru.M.R.Sivalingappa, S/o Ramaiah Perandapalli village and Post, Hosur Taluk, Krishnagiri Dist	Mugalur Village & Hosur Taluk	270 (P)	5.00.0	Roc.110/2008/ Mines-2 dated	04.09.2008 to 03.09.2018
2	Thiru.Annaiya Reddy S/o Venkata reddy No.40, Shakambri Layout, Anekal Road, Attibele, Anekal Taluk, Krishnagiri Dist	Mugalur Village & Hosur Taluk	231/4e1	0.81.0	Roc.175/2010/ Mines-2 dated 25.12.2010	31.01.2011 to 30.01.2016

III. Proposed Quarries

1	M/s.R.V.Enterprises, Partner.M.Ramamoorthy	Mugalur Village & Shoolagiri Taluk	Rough Stone	232/2 (Part)	2.40.0	Roc. No. 220/2019/Mines Dt. 13.06.2019	Precise area given Instant Proposal
Total					10.41.75		

The Total extent (Cluster) of the Existing / Lease expired / Proposed quarries are **10.41.75 Ha**

10. Land Requirement

The total extent area of the project is 2.40.0 Ha, Government Poramboke land in Mugalur Village of Shoolagiri Taluk, Krishnagiri District.

Table 8 Land Use Breakup

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Area under quarrying	Nil	1.76.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.01.0
4.	Green Belt	Nil	0.39.0
5.	Unutilized	2.39.0	0.23.0
	Total	2.40.0 Ha	2.40.0 Ha

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

Direction	Village	Distance in Kms	Population
Northeast	Devaganapalli	2.5 Kms	320
Northwest	Koottur	1.2 Kms	240
Southeast	Nagappan Agrapharam	2.2 kms	210
Southwest	Kallu Barundur	2.0 Kms	180

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 : 24 to 28 °C

ii) Average Maximum Temperature : 31 to 36 °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 (PM₁₀), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (64-40 µg/m³), PM_{2.5} (17-31 µg/m³), SO₂(5-14 µg/m³), NO_x (30-9µg/m³), 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 48 dB(A) respectively in Veera Anjanayer temple, Settipalli. The minimum Day Noise and Night noise were 43 dB(A) and 31 dB(A) respectively which was observed in Project site.

13.4 Water Environment

- The average pH ranges from 7.12 – 8.35.
- TDS value varied from 212 mg/l to 709 mg/l
- Hardness varied from 119 to 404 mg/l
- Chloride varied from 33.3 to 93.9 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 5.25 to 8.60 with organic matter 1.6 to 3.2 %. 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. 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 70% in this area

Table.10 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, Thethankottai maram, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram	70%	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 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 53,45,000/-** 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	1,11,20,000/-
2	Operational Cost	30,00,000/-
3	EMP Cost	3,40,000/-
	Total	1,44,60,000/-

Total project cost: 1,44,60,000/- (One crore forty four lakhs and sixty thousands only)

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.	1. Government Higher Secondary School, Masinayakkanapalli – 3.05 km, SW Provision of ➤ CCTV Camera facility, ➤ Xerox machine, ➤ Environmental books for library (in Tamil language), ➤ Greenbelt facilities and ➤ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture.	5,00,000
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.