

**May
2023**

**Executive Summary for Conducting Public Hearing
FOR**

**“M/s. Sumukha Blue Metals & Blocks LLP Rough
Stone Quarry over a total extent of 4.60.0 Ha”**

At

**S.F.No. 420 (Part-3) of Thuppuganapalli Village,
Shoolagiri Taluk, Krishnagiri District, Tamilnadu State**

Project Proponent:

**M/s. Sumukha Blue Metals & Blocks LLP,
No.56, 4th Floor, 6th Sector,
HSR Layout,
Bangalore – 560 102**

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,
Pallikaranai, Chennai -600100**

EXECUTIVE SUMMARY

1. Project Background:

The Proposed project is in Government Poramboke Land having total extent area of 4.60.00 Ha, located at S.F.No. 420 (Part-3) of Thuppuganapalli 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 78.0m – 3.0m Topsoil + 75.0m Rough Stone Above Ground Level Height is 45m and Below Ground Level Depth 33m. The Total Geological resources is about 27,93,910m³ of Rough Stone and 1,37,748m³ of Topsoil. The Mineable Reserves is about 12,98,970m³ of Rough Stone and 1,13,310m³ of Topsoil. The year wise production/recoverable reserves of rough stone for first 5 years is about 6,91,090m³ of Rough stone and 1,13,310m³ of Topsoil and next five years is about 6,07,880m³. Total recoverable reserves is about 12,98,970m³ of rough stone for 10 years. Total proposed period of mining Ten years.

The Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.550/2022 Mines dated 30.06.2022. 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 4.60.00 Hectares land is located Thuppuganapalli Village of Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone.
 District : Krishnagiri
 Taluk : Shoolagiri
 Village : Thuppuganapalli
 S. F. Nos. : 420 (Part-3)
 Extent : 4.60.00 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12° 37' 36.4595" N to 12° 37' 33.7082" N
2	Longitude	77° 57' 21.3621" E to 77° 57' 12.9017" E
3	Site Elevation above MSL	Maximum 813m and Minimum 768m above MSL.
4	Topography	Hilly terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	4.60.00 Ha
7	Nearest highway	AH-45: Chennai to Bengaluru Highway – 5.48Km – NNE. SH-85: Kelamangalam Road – 9.82Km – SW, MDR 844 – 3.57 Km - W
8	Nearest railway station	Kelamangalam Railway Station – 9.82Km - W
9	Nearest airport	Kempagowda International Airport – 68.36Km - NW
10	Nearest town / city	Town - Shoolagiri – 6.82 Km - NE City - Shoolagiri – 6.82 Km - NE District - Krishnagiri – 27.50 Km – SE
11	Rivers / Canal	• Ponnaniyar River – 0.77 Km – NE
12	Lake	• Lake 1 – 5.80Km – NE • Lake 2 – 4.76Km – W • Chappadi Lake – 5.34Km – NE • Konerapalli Lake – 5.64Km – N • Kamandoddi Lake – 5.94Km – NNW • Kamandoddi Old Lake – 5.82Km – NW

		<ul style="list-style-type: none"> • Nagamangalam Lake – 7.05Km – S • Anachandiram Lake – 7.84Km - NE
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"> • Sanamavu RF – 6.15Km – W • Perandapalli RF – 5.56Km – NW • Settipalli RF – 7.10 Km - NE • Udedurgam RF – 9.91Km – S • Cauvery North Wildlife Sanctuary – 9.68Km - S
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 back filling is required.

Figure 1: Location Map of the Project Site

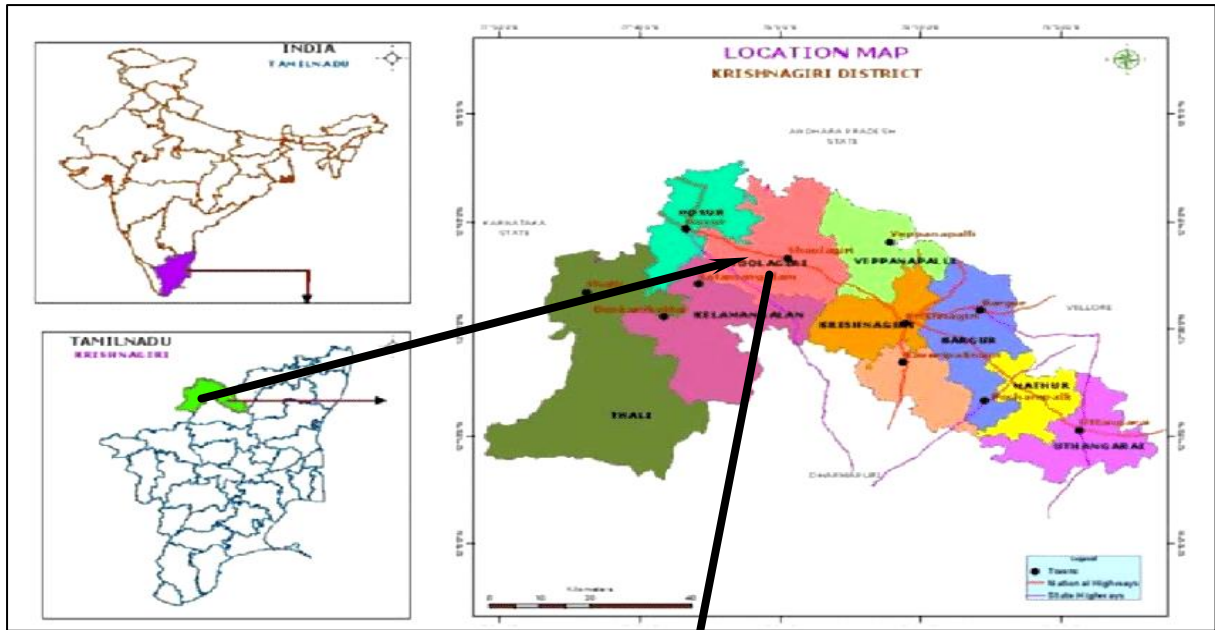


Figure 2: Google Image of the Project Site



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 resources have been calculated based on the cross-section method.

Table 2. Geological resources

GEOLOGICAL RESOURCES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m (100%)	Topsoil in Cu.m.
XY-AB	I	144	236	3			101952
	II	81	56	5	22680	22680	
	III	116	106	5	61480	61480	
	IV	139	138	5	95910	95910	
	V	144	169	5	121680	121680	

	VI	144	195	5	140400	140400	
	VII	144	209	5	150480	150480	
	VIII	144	228	5	164160	164160	
	IX	144	236	5	169920	169920	
	X	144	236	5	169920	169920	
	XI	144	236	5	169920	169920	
	XII	144	236	5	169920	169920	
	XIII	144	236	5	169920	169920	
	XIV	144	236	5	169920	169920	
	XV	144	236	5	169920	169920	
	XVI	144	236	5	169920	169920	
Total=					2116150	2116150	101952
XY-CD	I	76	157	3			35796
	II	52	109	5	28340	28340	
	III	76	139	5	52820	52820	
	IV	76	157	5	59660	59660	
	V	76	157	5	59660	59660	
	VI	76	157	5	59660	59660	
	VII	76	157	5	59660	59660	
	VIII	76	157	5	59660	59660	
	IX	76	157	5	59660	59660	
	X	76	157	5	59660	59660	
	XI	76	157	5	59660	59660	
	XII	76	157	5	59660	59660	
	XIII	76	157	5	59660	59660	
Total=					677760	677760	35796
Grand Total=					2793910	2793910	137748

Table 3. Mineable Reserves

MINEABLE RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m (100%)	Topsoil in Cu.m.
XY-AB	I	133	216	3			86184
	II	70	56	5	19600	19600	
	III	100	106	5	53000	53000	
	IV	118	138	5	81420	81420	
	V	118	165	5	97350	97350	
	VI	113	179	5	101135	101135	
	VII	108	188	5	101520	101520	
	VIII	103	199	5	102485	102485	

	IX	98	189	5	92610	92610	
	X	93	179	5	83235	83235	
	XI	88	169	5	74360	74360	
	XII	83	159	5	65985	65985	
	XIII	78	149	5	58110	58110	
	XIV	73	139	5	50735	50735	
	XV	68	129	5	43860	43860	
	XVI	63	119	5	37485	37485	
Total=					1062890	1062890	86184
XY-CD	I	66	137	3			27126
	II	52	98	5	25480	25480	
	III	65	123	5	39975	39975	
	IV	60	125	5	37500	37500	
	V	55	115	5	31625	31625	
	VI	50	105	5	26250	26250	
	VII	45	95	5	21375	21375	
	VIII	40	85	5	17000	17000	
	IX	35	75	5	13125	13125	
	X	30	65	5	9750	9750	
	XI	25	55	5	6875	6875	
	XII	20	45	5	4500	4500	
	XIII	15	35	5	2625	2625	
Total=					236080	236080	27126
Grand Total=					1298970	1298970	113310

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION (Frist Five(I-V) Years)								
Year	Section	Bench	L (m)	W (m)	D (m)	Volume in (m³)	Recoverable Reserves in (m³) (100%)	Topsoil in m³
I-YEAR	XY-AB	I	133	216	3			86184
		II	70	56	5	19600	19600	
		III	100	106	5	53000	53000	
		IV	118	138	5	81420	81420	
	XY-CD	I	66	137	3			27126
		II	52	98	5	25480	25480	
II-YEAR	XY-AB	V	118	165	5	97350	97350	
III-YEAR	XY-AB	VI	113	179	5	101135	101135	
	XY-CD	III	65	123	5	39975	39975	
IV-YEAR	XY-AB	VII	108	188	5	101520	101520	
	XY-CD	IV	60	125	5	37500	37500	

V-YEAR	XY-AB	VIII	103	199	5	102485	102485	
	XY-CD	V	55	115	5	31625	31625	
Total=						691090	691090	113310

YEARWISE DEVELOPMENT AND PRODUCTION (Second Five (VI-X) Years)

Year	Section	Bench	L (m)	W (m)	D (m)	Volume in (m ³)	Recoverable Reserves in (m ³) (100%)
VI-YEAR	XY-AB	IX	98	189	5	92610	92610
	XY-CD	VI	50	105	5	26250	26250
VII-YEAR	XY-AB	X	93	179	5	83235	83235
	XY-CD	VII	45	95	5	21375	21375
VIII-YEAR	XY-AB	XI	88	169	5	74360	74360
	XY-CD	VIII	40	85	5	17000	17000
IX-YEAR	XY-AB	XII	83	159	5	65985	65985
		XIII	78	149	5	58110	58110
	XY-CD	IX	35	75	5	13125	13125
		X	30	65	5	9750	9750
X-YEAR	XY-AB	XIV	73	139	5	50735	50735
		XV	68	129	5	43860	43860
		XVI	63	119	5	37485	37485
	XY-CD	XI	25	55	5	6875	6875
		XII	20	45	5	4500	4500
		XIII	15	35	5	2625	2625
Total=						607880	607880

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 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 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 source from nearby road tankers supply.

Table 5. Water Balance

Purpose	Quantity	Source
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Ayarnapalli which is about 0.90 km - N from project area
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	2.0 KLD	

8. Manpower

Total manpower required for the project is approximately 18 persons. 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 / Labors	5 Nos
		Cleaners	3 Nos
		Office Boy	1No
4.	Management & Supervisory staff		3 Nos
		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	Mineral	S.F. No	Extent in Ha	GO No. & Date	Lease Period
1.	Thiru.S.Sundraiah, S/o.Subramaniam, 14/5, Amman Nagar, Opp to Govt ITI HCF (Post), Hosur.	Thuppuganapalli village & Shoolagiri Taluk	Rough stone	420 (Part-2)	3.00.0	Rc.No. 98/2016/ Mines Dated: 08.08.2016	22.08.2016 to 21.08.2026
2.	M/s. AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur.	Thuppuganapalli village & Shoolagiri Taluk	Rough stone	637 (Part-3)	4.50.0	Rc.No. 211/2018/ Mines Dated: 25.01.2018	25.01.2019 to 24.01.2024

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.NIL.....					

3) Details of Proposed Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	M/s.Sumukha Blue Metals & Blocks LLP No.56, 4 th Floor, 6 th Sector, HSR Layout, Bangalore – 560 102.	Thuppugana palli village, Shoolagiri Taluk	Rough stone	420 (Part-3)	4.60.0	Rc.No. 550/2022/ Mines Dated:26.04. 2022	Instant proposal
2.	Thiru.Srinivasan	Thuppugana palli village, Shoolagiri Taluk	Rough stone	420 (Part-4)	4.50.0	Rc.No. 551/2022/ Mines Dated:26.04. 2022	Precise area given
3.	AVS Tech Solutions and Buildings	Thuppugana palli village, Shoolagiri Taluk	Rough stone	420 (Part-5)	4.90.00	Rc.No. 230/2019/ Mines Dated: 13.06.2019	Precise area given
4.	Thiru.K.P.Anand, S/o. V.P.Perumal, Vellampatti, Pennagaram, Dharmapuri	Thuppugana palli village, Shoolagiri Taluk	Rough stone	637 (Part-1)	4.00.0	Rc.No. 209/2018/ Mines Dated: 09.03.2018	Precise area given
5.	Thiru.K.P.Anand, S/o. V.P.Perumal, Vellampatti, Pennagaram, Dharmapuri	Thuppugana palli village, Shoolagiri Taluk	Rough stone	637 (Part-2)	4.50.0	Rc.No. 210/2018/ Mines Dated: 09.03.2018	Precise area given
6.	R.Adalarasu, S/o.Ramathilagam, D.No.2/389, Poosaripatti, Sokathur, A.Reddihalli, Dharmapuri	Thuppugana palli village, Shoolagiri Taluk	Rough stone	637 (Part), 4 (Part)	2.00.0 0.95.0	Roc.No. 231/2019/ Mines Dated: 13.6.2019	Precise area given

The Total extent of the Existing / Lease expired / Proposed quarries are **32.95.0 Ha.**

10. Land Requirement

The total extent area of the project is 4.60.00 Ha, Government Poramboke land in Thuppuganapalli 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	Nil	3.67.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	Nil	0.01.0
4.	Green Belt	Nil	0.91.0
5.	Unutilized Area	4.60.0	Nil
	Total	4.60.00	4.60.00

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	Ayarnapalli	4986	0.90 Km
2	South	Devasanapalli	1450	0.95 Km
3	East	Samanapalli	3198	2.18 Km
4	West	Udanapalli	1260	3.07 Km

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 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 : 39 ° 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 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 (63-38 µg/m³), PM_{2.5} (33-15 µg/m³), SO₂ (19-5 µg/m³), NO₂ (35-9 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from January 2023 to March 2023.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 62 dB(A) and 50 dB(A) respectively in project site. The minimum Day Noise and Night noise were 39 dB(A) and 35 dB(A) respectively which was observed in Govt Middle School, Thiyagarsanapalli. The observed values are all well within the Standards prescribed by CPCB.

13.4 Water Environment

- The average pH ranges from 7.09 – 8.11.
- TDS value varied from 489 mg/l to 1116 mg/l
- Hardness varied from 313 to 669 mg/l
- Chloride varied from 56.7 to 254 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 6.81 to 8.51 with organic matter 0.73

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. 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 230 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%	2300
Total		2300

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. 5,24,30,000/-** 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
1	Fixed Asset Cost	Rs.4,94,30,000/-
2	Operational and Fencing Cost	Rs. 30,00,000/-
	Total	Rs. 5,24,30,000/-

Environmental Management Plan Cost is about **Rs.2,48,77,133/-** for 10 years.

20. Corporate Environmental Responsibility

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

Table 13 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	(i) Panchayat Union Primary School, T. Kurubarapalli Provision of ➤ Classroom floor tiles & Painting works (ii) Government Higher secondary School, Uddanapalli Provision of ➤ Renovation of Playground and Playing equipments. And Basic amenities such as safe drinking water, Hygienic Toilets facilities, Environmental books in Tamil for library.	10,48,600/-
	Total	10,48,600/-

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 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.

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