

Executive Summary for Conducting Public Hearing

FOR

**“Tvl. NTC Blue Metals LLP Rough Stone and Gravel
Quarry over a total extent of 0.63.0 Ha”**

At

**S.No. 76/1(Part) in Kuppam village, Pugalur Taluk,
Karur District, Tamilnadu**

Project Proponent:

**Tvl. NTC Blue Metals LLP,
Prop. of. Mr.S. Muthusamy,
Rasmpalayam, Keelsathambur
Namakkal District – 637207**

Project termed under schedule 1(a) Category B₁

Prepared by



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EXECUTIVE SUMMARY

1. Project Background:

The Proposed project total extent area is 0.63.0 Ha, Own patta land in Kuppam Village of Pugalur Taluk, Karur District. The category of project is B1, It is a new Rough stone quarry in Kuppam village. The area is situated on Plain terrain sloping towards Western covered with Rough Stone which does not sustain any type of vegetation.

The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 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 25 m below ground surface level. The Total Geological reserve is about 145084 m³ of Rough Stone and 12616 m³ of Gravel. The Mineable Reserves of Rough stone is 42712m³ and Gravel is 7888m³. The proposed production scheduled for the five years about 8542m³ of Rough stone and 7888m³ of Gravel.

- The Mining Plan was prepared by Recognized Qualified Person and approved by Deputy Director, Geology and Mining, Karur District, vide R.C. No. 619/Mines/2020, Dated :22.06.2021. 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 New Rough Stone and Gravel Quarry over an extent of 0.63.0 Hectares land is located Kuppam Village of Pugalur Taluk, Karur District.

Mineral intends to quarry : Rough stone and Gravel
District : Karur
Taluk : Pugalur
Village : Kuppam
S. F. Nos. : 76/1(Part)
Extent : 0.63.0 Hectares

Table 1: Brief Description of the Project

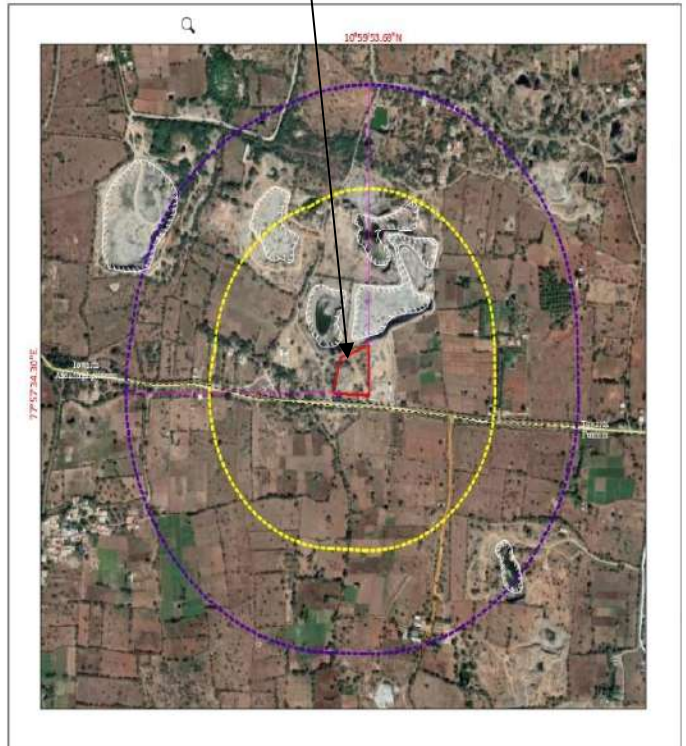
S. No	Particulars	Details
1	Latitude	10°59'50.56"N to 10°59'53.69"N
2	Longitude	77°57'34.30"E to 77°57'36.99"E
3	Site Elevation above MSL	165m from MSL
4	Topography	slightly elevated terrain
5	Land use of the site	Patta Land.
6	Extent of lease area	0.63.0 Ha
7	Nearest highway	<ul style="list-style-type: none"> • The SH-84 is situated 2.4km away towards North of the lease area. • The NH-67 is situated 4.65km away towards South of the lease area.
8	Nearest railway station	Pugalur – 6.8Km - Northeast
9	Nearest Airport	Tirichirapalli – 85.8Km- East
10	Nearest town / city	i. North - Uppupalayam - 2.1km ii. South - Talayuttupatti - 0.7km iii. East - Punnam - 3.8km iv. West - Salipallayam - 2.45km
11	Rivers / Canal	Cauvery River – 8.7 Km, North Ameravathi River – 10 Km, South Canal- 1km-North East Canel- 8.3km-Southeast

12	Lake	Odai-8km South East Tank-8km South East
13	Hills / valleys	Nil within 10km Radius
14	Archaeologically places	Nil within 10km Radius
15	National parks /Wildlife Sanctuaries	Nil within 10km Radius
16	Reserved / Protected Forests	There is no reserve forest within the 10km radius periphery of proposed lease area
17	Seismicity	Proposed Lease area come under Seismic zone-II(low risk area)
18	Defense Installations	Nil within 10km 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 karur.
- ❖ 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



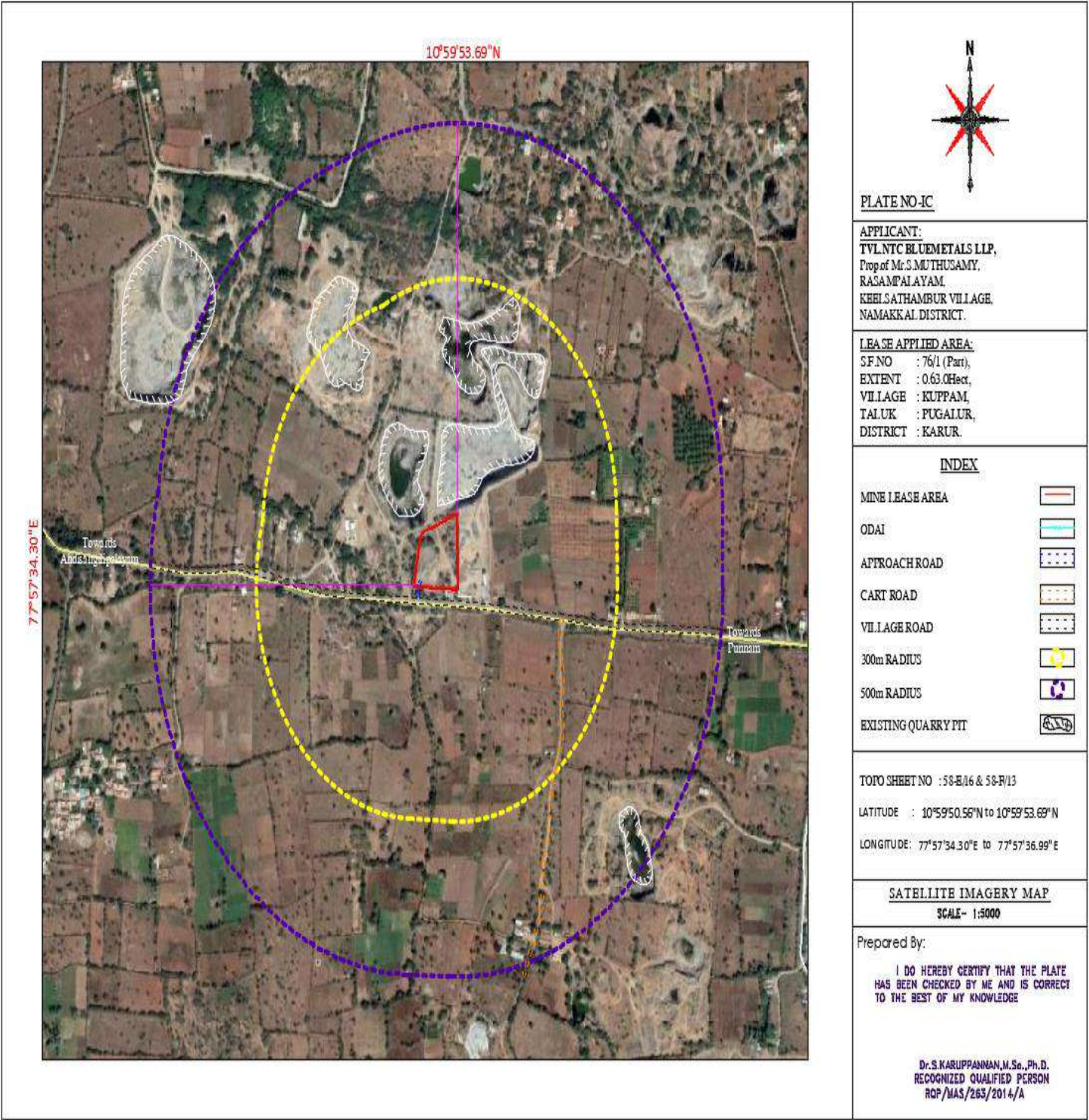


Figure 2: Google Image of the Project Site

4. Charnockite

Geologically, the entire district can be classified into hard rock formations. Hard Rock Formation: - More than 90 percent of the district is underlain by hard rock of Archaean age. The gneissic type of formation is the major formation among the various types of hard rocks. (1) Khondalite group, (2) Charnockite group and (3) Migmatite complex. Khondalite group comprises quartzite, crystalline limestone. Charnockite group comprises pyroxene granulite and charnockite. Migmatite complex is represented by hornblende–biotite gneiss, granitic gneiss and pink migmatite.

5. Geological Resources

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

Table 2. Resources and reserves of proposed project

PARTICULARS	DETAILS	
	Rough Stone (5 Year Plan period)	Gravel (1 Years Plan period)
Geological Resources in m ³	145084	12616
Mineable Reserves in m ³	42712	7888
Mining Plan Period	5 Years	
Number of Working Days	300 Days	
Production per day in m ³	28	26
No of Lorry loads (6m ³ per load)	4	4
Total Depth of Mining	25 m bgl (2 m Gravel + 23 m Rough Stone)	

Table 3. ULTIMATE PIT DIMENSION

PROPOSAL – P1			
Pit	Length (Max) (m)	Width (Max) (m)	Depth (Max)
I	68	58	25 m bgl

6. Mining

Opencast mining

The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 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.

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 5.0 KLD. Domestic water will be sourced from nearby Talayuttupatti Village and other water will be source from nearby road tankers supply.

Table 4. Water Balance

Purpose	Quantity	Source
Drinking Water	2.0 KLD	Rainwater accumulated in Mine Pit/ Water Tanker
Green belt	1.75KLD	Rainwater accumulated in Mine Pit/ Water Tanker
Dust suppression	1.25 KLD	Water Tankers
Total	5.0KLD	

8. Man Power

Total manpower required for the project is approximately 27 persons. Workers will befrom nearby villages.

Table 5. Man Power

1.	Highly Skilled	Quarry Manger	1No.
		Mines Forman	---
		Mechanical Engineer	---

		Account cum & admin	1No.
2.	Skilled	Earth moving Operator	2 No.
		Driver	4 Nos.
		Mechanic	1 No.
		Blaster/Mat	---
3.	Semi skilled –	Helpers, Greaser's	4 Nos
4.	Unskilled	Musdoor / Labours	10 Nos
		Cleaners	3Nos
		Attendant's	1No
Total =			27 Nos

No child less than 18 years will be not involved 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

1) Proposed Quarries:

Code	Name of the Owner	S.F.No.	Extent in Hect.	Status
P1	Tvl. NTC Blue Metals LLP, Prop. of. Mr.S. Muthusamy, Rasmpalayam, Keelsathambur Namakkal – 637207	76/1 (Part)	0.63.0ha	LR.NO.SEIAA TN/F.No.8598/2021/ToR-1023/2021 Dated: 26.08.2021
Total			0.63.0ha	

2) Existing Quarries:

Code	Name of the Owner	S.F.Nos.	Extent in Hect.	Lease Period
E1	Thiru.K. Nallasamy S/o.Krishnan, Punnamchatram Post., Avavakurichi Taluk Karur District.,	226/1	2.95.0	Lease period 02.9.2016 to 01.09.2021
E2	Thiru. P. Marappan S/o. Palaniyappan Andipatti Kuppam Village Aravkurichi Taluk, Karur District.	74 75/3B	0.74.5 1.37.0 ha 2.11.5	Lease period 14.10.2016 to 13.10.2021
E3	Tmt.V. Kavitha W/o.Vadivel Nochi Kattur Kuppam Post Aravkurichi Taluk, Karur District.	75/1A, 75/1B, 75/2	0.49.5 0.47.5 0.91.0 1.88.0	Lease period 05.08.2016 to 04.08.2021
TOTAL			6.94.5 ha	
TOTAL CLUSTER EXTENT			7.57.5 ha	

3) Lease Expired and abandoned Area:

SI. No	Name of the owner	S.F.No.	Extent (Hect)	Lease Period	Remarks
1	N. Sakthivel S/o. Nallappa gounder Andipatti Karudayampalayam Aravakurichi Taluk, Karur District.	75/3A 76/1	2.17.0	05.05.2006 to 04.05.2011	---

500m radius details around project area, Pugalur Taluk, Kuppam Village, Karur District.

The Total extent of the Existing / Lease expired / proposed quarries are 0.63.0 Ha

10. Land Requirement

The total extent area of the project is 0.63.0Ha, Own Pattaland in Kuppam Village of Pugalur Taluk, Karur District.

Table 8 Land Use Breakup

S. No.	Land Use	Present Area (Hect)	Area In Use During The Quarrying Period (Hect)
1.	Area under quarry	---	0.40.0
2.	Infrastructure	---	0.01.0
3.	Roads	---	0.02.0
4.	Green Belt	---	0.16.6
5.	Un – utilized area	0.63.0	0.03.4
	Total	0.63.0	0.63.0

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

S.No	Direction	Village	Distance	Population
1	North	Uppupalayam	2.1 Kms	1374
2	East	Talayuttupatti	0.7 Kms	1842
3	South	Punnam	3.8 kms	5446
4	West	Salipallayam	2.45 Kms	2374

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.

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 : 28.2 °C
- ii) Average Maximum Temperature. : 38 °C
- iii) Average Annual Rainfall of the area : 724 mm | 28.5 inch.

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 (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (62-40 µg/m³), PM_{2.5} (30-18 µg/m³), SO₂ (18-2µg/m³), NO₂ (28-2 µg/m³), all the parameters are well within the standards prescribed

by National Ambient Air Quality during the study period from June to August 2022.

13.3 Noise Environment

The vehicular movement on road and mining activities is the major sources of noise in study area, the environmental assessment of noise from the mining activity and vehicular traffic can be undertaken by taking into consideration various factors like potential damage to hearing, physiological responses, and annoyance and general community responses. The main objective of noise monitoring in the study area is to establish the baseline noise level and assess the impact of the total noise expected to be generated during the project operations around the project site.

Ambient noise levels were measured at 5 locations around the proposed project site. The maximum Day noise and Night noise were found to be 55 dB (A) and 44 dB(A) respectively in Canara Bank - Thalaiyattupatti. The minimum Day Noise and Night noise were 39 dB (A) and 33 dB (A) respectively which was observed in Project Site.

13.4 Water Environment

- The average pH ranges from 7.11 – 7.34 and within the acceptable limit of 6.5 to 8.5 pH.
- TDS value varied from 417 mg/l
- Hardness varied from 495 to 531 mg/l
- Chloride varied from 84.3 mg/l
- Nitrates is around 20 mg/l
- Sulphates content is 25.1 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 6.01 to 7.35 with organic matter 1.24 to 3.02 %. 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 private patta land. There are 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 component of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Pongam, Pinnata, and Casuarina etc will be planted along the lease boundary and avenues as well as over Non-active dumps at a rate of 130 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table.10 Plantation/ Afforestation Program

Year	No. of trees proposed to be planted	Survival %	Name of the species	No. of trees expected to be grown
I	130	80%	Neem, Pongamia	104
II	130	80%	Pinnata, Casuarina	104
III	130	80%	etc.,	104
IV	130	80%		104
V	130	80%		104

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. 31,94,000** 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	15,49,000
2	Operational Cost	3,25,000
3	EMP Cost	3,20,000
4	Machinery cost	10,00,000
	Total	31,94,000

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 2% of the project cost (Rs.)
1.	A development plan will be implemented to provide toilet facilities in government schools.	Rs. 63,880/-

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.

