

DRAFT ENVIRONMENT IMPACT ASSESSMENT REPORT & ENVIRONMENT MANAGEMENT PLAN Of

**Nardaha Limestone (Low grade) Quarry
at**

**Village: Nardaha ,Tehsil: Arang District: Raipur , State : Chhattisgarh ,
Area 0.963 hac at khasra no. 1945(p) ,Capacity : 43350 Tons per annum**

Proposal No. SIA/CG/MIN/54052/2020

EXECUTIVE SUMMARY -ENGLISH

Applicant

Inder Kumar Athwani

Indian Mine Planner & Consultant

NABET/EIA/1821/IA0037

ACCREDITED BY NABET UNDER "A" CATEGORY FOR OPEN CAST MINES

Corp. Office: GE-61, Rajdanga Main , Road, Behind Gateway Hotel, EM Bye Pass, Kolkata

EXECUTIVE SUMMARY

INTRODUCTION

Environmental Impact Assessment (EIA) is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision making tool, which guides the decision makers in taking appropriate decisions for proposed projects. EIA systematically examines both beneficial and adverse consequences of the proposed project and ensure that these impacts are taken into account during the project designing.

The mining lease is located in village of Nardaha Tehsil- Arang , District- Raipur (C.G.) Geographically the ML area extends from Longitude 81°46'16.08"E to 81°46'21.22"E " and Latitude 21°17'42.69"N to 21°17'46.11"N ".

The study area of the proposed project comprises of 10 km radius around the mining lease boundary, the map showing the core zone (ML area) and buffer zone (10 km radius from the lease boundary).

The life of the mine is anticipated at 5 years based on the level of exploration and reserve established as per UNFC classification and expecting the market demand will remain at 43350 tonnes per annum.

Location

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Connectivity

The lease area is about 15 kms from Raipur.. The QL area can be approached from National Highway 217 which is at a distance of 8 Km South Direction and 4km North west from Raipur -Baloda bazar road SH-09 The Nearest Railway Station is Mandir Hasaud Railway Station at 7 Km South Direction. The Nearest Airport is Swami Vivekanand Airport at a distance of 12.34 Km SW Direction.

Mailing/ Correspondence Address of Project Proponent:

Shri Inder Kumar Athwani
Raipur (C.G)

Size of the Project

The total Mine Lease areas considered is 0.963 ha. The proposed production is 43350 tonnes per annum.

Anticipated Life of Project and Cost of the Project

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MINING

Opencast semi mechanized method of mining will be adopted in the lease area. The excavation will be carried out usually by manual labour with the use of jack hammer, excavator, compressor etc. and loaded into tractor/truck/tipper. The Limestone will be suitably blended to be supplied in market. Rest is inter burden.

Year wise Production details

Production Plans for First Five Years

Year-wise Production	Area in (m ²)	Depth in (m)	Volume	Sp. Gravity	Tonnes	
1st Year 1st Bench	6760	1.5	10140	2.5	2350	40500
2nd Bench	4040	1.5	6060	2.5	15150	
II Year 2nd Bench	2173	1.5	3259.5	2.5	8148.75	40500
3rd Bench	5747	1.5	8620.5	2.5	21551.25	
4th Bench	2880	1.5	4320	2.5	10800	
III Year 4th Bench	2375	1.5	3562.5	2.5	8906.25	43350
5th Bench	4812	1.5	7218	2.5	18045	
6th Bench	4373	1.5	6559.5	2.5	16398.75	
IV Year 7th Bench	3955	1.5	5932.5	2.5	14831.25	40068.75
8th Bench	3555	1.5	5332.5	2.5	13331.25	

**PROJECT: NARDAHA LIMESTONE QUARRY OVER AN AREA OF 0.963 Ha VILLAGE NARDAHA
 APPLICANT: SHRI INDER KUMAR ATHWANI**

9th Bench	3175	1.5	4762.5	2.5	11906.25	37852.5
10th Bench	2950	1.5	4425	2.5	11062.5	
V Year 11th Bench	2450	1.5	3675	2.5	9187.5	
12th Bench	2250	1.5	3375	2.5	8437.5	
13th Bench	1920	1.5	2880	2.5	7200	
14th Bench	1572	1.5	786	2.5	1965	
Total			577851		217938.8	

Summary of Land use at different stage will be as follows (inHa):

Land use pattern:

Articles	Forest Land	Govt. Land	Stony waste Land	Land use at the end of 5 years in Hect.
A. Lease Area	Nil	0.963	Nil	0.963
B. Quarrying & allied	NIL	0.676	NIL	0.676
1. Area under pits				
2. Area for dumping	Nil	0.287 along lease boundary	Nil	0.287 along lease boundary
3. Area for road	nil	-	-	-
4. Area for Infrastructure	nil	-	-	-
5. Plantation (in dumping)	nil	0.287 along lease boundary	Nil	0.287 along lease boundary
6. Storage of Mineral	nil	-	-	-
7. Storage of fines	nil	-	-	-
8. Crushing unit	nil	-	-	-
9. Unused area	nil	-	-	-
Total		0.963		0.963

Systematic working will be done by formation of benches as per M.M.R. 1961. All applicable rules of MMR 1961, Mines Act-1952, MCR-2016 and MCDR-1988 will be followed for safe, scientific & systematic working to follow the principles of safety & conservation of human health & mineral.

Disposal of Waste

Nature of waste, its rate of yearly generation and proposals for disposal of waste: The mine waste is in the form of following:-

- (1) Top soil:** -Only top soil will be removed from the lease area. Total Area 0.676 h(6760m³)
Top soil will be generated from the area which will be dumped on 0.287h area.
- (2) OB and Mine waste:** - The waste generated as topsoil will be used for plantation purpose at safety zone.

Selection of Dumping Site:

Total 0.676 ha (6760 m³)soil will be generated from the area which will be dumped on 0.287h area.

Method and manner of disposal of waste: Top soil excavated from the height of Max 2.0 Mtrs and will be dumped at safety barriers around the lease area and will be used for plantation purpose at safety zone.

Use of Mineral

The low grade Limestone is being sale to various part of the India for making roads, building and for other construction works etc

General Features

I) Surface Drainage Pattern

The lease area is drained by southerly flowing on-perennial rivers. The surface water courses within 10 Km are as under –

- Pond at Nardaha – 1.52 km West
- Pond at kurud 2 pond – 3.84 km SE

ii). Vehicular Traffic Density

The lease area is about 15 kms from Raipur.. The QL area can be approached from National Highway 217 which is at a distance of 8 Km South Direction and 4km North west from Raipur -Baloda bazar road SH-09 The Nearest Railway Station is Mandir Hasaud Railway Station at 7 Km South Direction. The Nearest Airport is Swami Vivekanand Airport at a distance of 12.34 Km SW Direction

Traffic Study

S. No.	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle (PCU)/Hour
		State Highway 22		State Highway 22
1.	Cars	195	1.0	190
2.	Buses	55	3.0	174
3.	Two wheelers	300	0.5	142.5
4.	Three wheelers	135	1.50	195
5.	Trucks	163	3.0	477
Total		848		1178/24=49 PCU/hr

Existing Traffic Scenario & LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
State Highway 22	49	1100	0.04	A

Note: V= Volume in PCU's/hr & C= Capacity in PCU's/ hr

The existing Level of Service near Village is "A" i.e. excellent and at NH is "A" i.e. excellent.

V/C	LOS	Performance
0.0-0.2	A	Excellent
0.2-0.4	B	Very Good
0.4-0.7	C	Good/ Average/ Fair
0.7-0.8	D	Poor
0.8-1.0	E	Very Poor
>1.0	F	Worst

Source: Transportation Research Board (1994) Highway Capacity Manual, 3rd Edition, p. 3-9. sf = free flow speed, v = volume, c = capacity, $a = 0.15$ and $b=4$.

During Mine Operation

Excavation per Year	: 43350 TPA
Excavation per day	: 145 Tonnes
Maximum capacity of truck	: 10 T
One dumper can carry (80% as safety measure)	: 8 T
Working hours per day	: 8 hour

No. of trips required per day	: 145/8=18.12 or say 18.00
No. of Truck required	: 18
No. of trucks deployed/day to and fro	: 18 * 2 trucks = 36 trucks

Traffic Scenario & LOS					
Road	Increased PCU'S- Durg Rd	V	C	Modified V/C Ratio	LOS
State Highway 22	49+36	85	1100	0.07	A

Conclusion

The LOS value from the proposed mine may be "Excellent". So the additional load on the carrying capacity of the concern roads is not likely to have any significant adverse effect.

iii) Water demand

No processing of mineral will be done in the mine. Only simple sizing and sorting will be done.

Manpower Requirement

About 18 persons will be getting direct and indirect employment in this mine. The man power will be mostly skilled.

DESCRIPTION OF BASELINE-ENVIRONMENT

This section contains the description of baseline studies of the 10 km radius of the area. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed. Environmental data has been collected in relation to propose mining for:-

- (a) Land
- (b) Water
- (c) Air
- (d) Noise
- (e) Biological
- (f) Socio-economic

(a) Land Use: The land-use is divided into agriculture land, settlement, and river and forest area as shown in the map. The area is fertile and dominated by the proportion of agriculture land.

Land Use Pattern of the Study Area (within 10 km Buffer)

S.N.	LAND USE TYPE	AREA (in ha)
1	OPEN LAND	620.87
2	STONY QUARRY	354.23
3	SETTLEMENT	510.64
4	WATERBODIES	280.50
5	AGRICULTURE LAND	30640.41
TOTAL		32406.65

There is no National Park, Biosphere reserve, Migratory routes of fauna and National Monument within 10km periphery of the lease area as per secondary data available. There is no habitation within lease area.

Analysis Results of Baseline Environment

(a) Results of Analysis of the Soil.

The analysis results show that soil is basic in nature as pH value ranges from 6.65 to 7.25 showing the saline property of soil. High electrical conductivity (375 to 446 $\mu\text{S}/\text{cm}$) is observed in the analysis report showing soil electrical behavior and dissolved solids in soil. The presence of Nitrogen content varies from 0.063 to 0.083 %. The concentration of Nitrogen, Phosphorus & Potassium are found low value in the soil samples. pH and EC values vary greatly and are affected by several environmental factors including, climate, local biota (plants and animals), bedrock and surficial geology, as well as human impacts are shown in the analysis report.

Low values of EC indicate relatively dilute waters, such as distilled water or glacial melt water and low deposition of TDS.

(b) WATER ENVIRONMENT

The results of Ground water samples are collected at eight locations in the Post-monsoon season as discussed above for organoleptic & physical parameters, general parameters, toxic and biological parameters. The analysis results at the six ground water locations and two surface water locations are given below:

The analysis results indicate that pH of the groundwater is in range of 7.06 – 7.12. The TDS were found to be in the range of 335-508 mg/l. Total Hardness is in range of 164.17 – 188.42 mg/l. The analysis results indicate that pH of the surface water to be in range of 7.87– 7.89. The TDS is found to be in the range of 487-534 mg/l. Total Hardness is in range of 617-621 mg/l. Other parameters like chloride and sulphate are observed within the prescribed limits. The necessary treatment required to minimize the impact is mentioned in Environment Management Plan and cost is born by the Project Proponent.

(c) AMBIENT AIR QUALITY

The Ambient Air Quality Monitoring reveals that of Ten monitoring stations the minimum concentrations of PM_{2.5} are 21.08 µg/m³ at AQ8 (Silent Zone) and maximum 43.55 µg/m³ at AQ1 (Core Zone). The results of PM₁₀ reveal that the minimum concentration of 41.19 µg/m³ at AQ8 (Silent Zone) while maximum concentration of 63.15 µg/m³ is found at AQ1 (Core Zone). These values for PM₁₀ and PM_{2.5} are within prescribed CPCB limit of 100 µg/m³ and 60 µg/m³ respectively for residential and rural areas at all stations.

The gaseous pollutants SO₂ and NO₂ are within the prescribed CPCB limit of 80 µg/m³ for residential and rural areas at all stations. The minimum & maximum concentrations of SO₂ were found to be 9.06 µg/m³ at AQ5 (Silent Zone) & 16.23 µg/m³ at AQ10 (Max GLC) respectively. The minimum & maximum concentrations of NO₂ are found to be 9.22 µg/m³ at AQ 8 (Silent Zone) & 16.24 µg/m³ at AQ10 (Max GLC), respectively.

(d) NOISE ENVIRONMENT

The values of noise observed in some of the areas are primarily owing to vehicular traffic and other anthropogenic activities. Noise monitoring results reveal that the maximum & minimum noise levels at day time were recorded in the range of 61.3 dB(A) at NQ6 (Industrial Zone) and 39.5 dB(A) at NQ8 (Silent Zone) and maximum & minimum noise levels at night time were recorded in the range of 46.1 dB(A) at NQ6 (Industrial Zone) and 30.5 dB(A) at NQ8 (Silent Zone), respectively.

(e) BIOLOGICAL ENVIRONMENT

The lease area as well as buffer zone area reveals no endangered and endemic species of flora and fauna in the area.

(f) Socio- economic

Population Composition

According to 2011 Population Census the study area has a total population of 110147. Of this 50.73 percent are male and the remaining 49.27 percent are female. Further 17.09 percent of the total population belongs to 0-6 age group. About 48.97 percent of them are male and the remaining 51.03percent are female.

Sex Ratio

The overall sex ratio in the study area has been worked out to 971 females per 1000 males, which is more than the national average of 940 females per 1000 males. The highest sex ratio recorded in the study area is 1028 females per thousand of males. Sex ratio of Children belonging to 0-6 age group has been worked out to 1042 females per 1000 males.

Density of Population

The overall density of population in the study area has been worked out to 464 persons per sq. Kilometre. This is less than the density of population for the state, which stands at 489 persons per sq. Kilometre, according to census 2011.

Households

There are 22750 households in the study area and the average household size is seven.

Social Structure

In the study area the total number of persons belonging to Scheduled Caste community is 26235, which is 23.82 percent of the total population. The gender wise distribution of schedule caste population indicates male 50.15 percent and female 49.85 percent, registering a sex ratio of 993 females per one thousand males.

Further analysis of data reveals that in the study area, the total number of persons belonging to Scheduled Tribe community is 4131, which is 3.75 percent of the total population. This is nearly same as the total number of persons belonging to Scheduled caste community residing in the study area.

About 72.43 percent of the total population belongs to General category, which includes people belonging to 'Other Backward Castes'. In absolute number the population belongs to this category are 79781 with 50.93 percent male and 49.07 percent female. The sex ratio of General category population has been worked out to 963 females per 1000 males.

The socio-economic development of poor and downtrodden scheduled caste and scheduled tribe people is a continuous process and the governments, both at the centre and the states are constantly making efforts to improve the destiny of these people. Distribution of surplus land to the members of the above categories of people is an important step taken by the government for their economic empowerment. The State Governments have drawn up its own list of socially and educationally backward classes and implementing various developmental schemes for them. These schemes are mainly in the field of education and income generation. All the ongoing schemes are critically examined and modified periodically to cater to the needs of different groups amongst the above communities. The government has also started various schemes to improve the quality of life of the rural poor, especially for the scheduled castes and scheduled tribes by making special provisions for them. 'Sampornma Grameen Rozgar Yojana' (SGRY) is one such programme, which was launched to safeguard the interest of the weaker sections and women by providing them wage employment. The 'Swarnjayanti Gram Swarozgar Yojana' (SGSY), another rural development scheme aims at bringing poor families above the poverty line by providing them with income generating assets through a mixture of credit and subsidy. The SGSY has also made an explicit provision that 50 per cent of the Swarozgaris assisted should be from Scheduled caste and Scheduled Tribe communities.

Over the decades the Scheduled caste and scheduled tribe people are making rapid progress both in economic and social sphere. Today they are no more untouchables. The literate Schedule Caste and Scheduled tribe people are engaged in trade, commerce & industry, private & government services including police and armed forces.

Literates and Literacy Rate

All persons aged seven years and above, who can both read and write with understanding in any language including Braille are considered as literate. The total numbers of literate persons in the study area are 81519 which is 74.01 percent of the total population. Of the total number of literate persons 56.97 percent are male and the remaining 43.03 percent are female.

The overall literacy rate in the study area has been worked out to 74.01 percent. The gender wise distribution of literacy rate reveals that 83.10 percent of the literate persons are male and 63.96 percent are female. This creates a gender gap of 19.14percent.

RESULTS OF ANALYSIS OF THE

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10.4 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

10.4.1 Impact on Ambient Air Quality

The mining is proposed to be carried out by opencast semi mechanized method. The air borne particulate matter generated by ore and handling operations as well as transportation is the main air pollutant. The emissions of Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) contributed by vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions.

Mitigation Measures

1. Water sprinkling will be done on the haul roads twice in a day.
2. The dust generated during the process will be minimized by water spray at the working faces before and after the activity.
3. Plantation will be carried out on approach roads and in Lease boundary.
4. Planning transportation routes of mined material so as to reach the nearest paved roads by shortest route. (minimize transportation over unpaved road);
5. Personal Protection Equipments (PPE) like dust masks, ear plugs etc. will be provided to mine workers.
6. Rock breaker will be used for breaking over size boulders in order to reduce dust and noise generation, which otherwise would be generated due to secondary blasting.
7. Speed limit will be enforced to reduce airborne fugitive dust from vehicular traffic.

8. Deploying PUC certified vehicles to reduce their noise emission.
9. Haul road shall be covered with gravels
10. Spillage from the trucks will be prevented by covering tarpaulin over the trucks.
11. Ambient Air Quality Monitoring will be conducted on regularly basis to assess the quality of ambient air.
12. Proper maintenance of machines improves combustion process & makes reduction in the pollution.
13. Good maintenance and monitoring of fuel and oil will not allow significant addition in the gaseous emission.

10.4.2 NOISE ENVIRONMENT

Noise generated at the mine is due to semi mechanized mining operations and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area.

The impact of noise on the villages is negligible as the villages are far located from the mine workings. Since there is no involvement of major machinery, the impact of noise levels will be minimal.

S. No.	Impact Prediction	Mitigation Measures
1	Noise Impact due to mining activities.	The noise levels from all the sources are periodical and restricted to particular operation.
2	Noise impact due to vehicular movement.	a) Proper maintenance, oiling and greasing of machines at regular intervals will be done to reduce the generation of noise. b) Plantation along the sides of approach roads, around office building and mine area will be done to minimize the propagation of noise. c) Personal Protective Equipments (PPE) like earmuffs/earplugs will be provided to all operators and employees working near mining machineries or at higher noise zone. d) Periodical noise level monitoring will be done

10.4.3 BIOLOGICAL ENVIRONMENT

S. No.	Impact Predicted	Suggestive measure
1	Disturbance of free movement/living of wild fauna	<ul style="list-style-type: none"> • Care will be taken that noise produced during vehicles movement for carrying OB and ore materials are within the permissible noise level. • Care will be taken that no hunting of animals (birds) carried out by labours.

		<ul style="list-style-type: none"> • Labours will not be allowed to discards food, plastic etc., which can attract animals near the core site. • Only low polluting vehicle will be allowed for carrying ore materials. All vehicles allowed in the project site area will have to provide pollution under control certificate at the end of three months • Noise level will be within permissible limit (silent zone-50dB during day time) as per noise pollution (regulation and control), rules, 2000, CPCB norms
2	Harvesting of flora	<ul style="list-style-type: none"> • No tree cutting, chopping, lumbering, uprooting of shrubs and herbs should be allowed • Collections of economically important plants will be fully restricted

10.4.4 LAND ENVIRONMENT

S. No.	Impact Prediction	Mitigation Measures
1	Change in the Topography of the Land / Land Degradation	The proposed mining activity is carried out in flat region and waste land After removal of ore body, a undulating portion will be created. All the broken area will be reclaimed by systematic backfilling and rehabilitated by afforestation so that landscape of the area is improved. And rest area is used as water reservoir and used for pisciculture
2	Solid waste generation	About 10% mineral wastes will be generated. Top Soil will used on the barrier zone areas on which plantation will be raised.
3	Change in Drainage Pattern	Water flow / course will not be obstructed and natural drains or nallahs will not be disturbed. Run-off from mine and mineral stack will be prevented to avoid being discharged to surroundings, particularly to agricultural land. Garland drains and, catch pits has been constructed to prevent run off affecting the surrounding agricultural land. Green belt has been developed in boundary.
4	Impact on the Agricultural Practice at nearby area due to dust generation	Agriculture activities are practiced nearby areas may impacted because of dust generation but mitigative measures such as regular water sprinkling on active areas for example haul roads, excavation sites will be strictly followed so that impact is minimized.

10.4.5 WATER ENVIRONMENT

S. No.	Impact Prediction	Mitigation Measures
1	Effect on the Ground Water Table	Max Elevation of the ML area is 289 m AMSL Ultimate depth of mine is up to 263.5 AMSL. Ground Water table is 40m below ground level. The mining activity will not intersect with the ground water table.
2	Wash off from the dumps	No dumping has been proposed.
3	Soil Erosion	Reclamation of the mined out area will be done with plantation to avoid the soil erosion
4	Waste Water generation/ Discharge	Toilets with septic tanks will be used; hence no sewage / liquid effluent will be spread and contamination is also not expected
5	Siltation in nearby agriculture field	Garland drains have been constructed on the sloping side barrier of the ML area. The garland drain has been routed through settling tank to remove suspended solids from flowing into storm water.

10.5 ADDITIONAL STUDIES

DISASTER MANAGEMENT PLAN

In order to avoid any danger in the mine site at the end of life of mine a disaster management cell headed by local authority District Collector will be constituted. Police department health authorities, including doctor, ambulances and so on will have a vital part to play following a disaster along with the mine management, and they will be an integral part of the disaster management plan.

The disaster management plan is aimed to ensure safety of human life and property and protection of environment Following are the objective of the disaster management plan.

- (i) First Aid to injured.
- (ii) Rescue operation and provision of adequate medical facilities to the injured.
- (iii) Safety of the human life in the buffer zone if needed.
- (iv) Protecting and minimizing damage to property and the environment.
- (v) Initially restrict and ultimately bring the incident under control.
- (vi) Identify any dead.
- (vii) Inform to the administration, DGMS and statutory persons as per Rules.

10.6 PROJECT BENEFITS AND COSTS EVALUATION

The project will improve the physical infrastructure, social infrastructure like improvement of road conditions water supply during dry season, drainage, educational institutions and improved environmental conditions, etc. The project also provides direct employment to 20 persons and indirect employment to another 19 persons. It increases economic activities, better living standard, educational facility, health facility and infrastructural development. The project will contribute to district mineral fund which will directly provide aid to the local

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authority to fund the development projects. The management will provide free saplings of fruit bearing and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains.

The CER activities are increasingly being taken up by the project proponent not only as fulfilling of mandatory provisions but also for the formation or enhancement of brand image. Besides the above, CER is seen more as a responsibility towards Environment & society rather than a business promotion activity.

Year wise allocation of funds for the above activities proposed to be taken up by the project proponent is provided in the table below:

Tentative allocation of funds for the various activities proposed to be taken up by the project proponent under CSR program

S. No	Activities	Tentative allocation of fund in Thousands					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Health awareness and camps for local community	2500 0	25000	25000	2500 0	25000	25000
2	Financial Assistance for Construction of separate toilets for boys and girls in schools	4000 0	40000	40000	4000 0	40000	40000
3	Water supply in dry season	1500 0	15000	15000	1500 0	15000	15000
4	Green Belt Development in Buffer Zone	2000 0	20000	20000	2000 0	20000	20000
Total		1 Lacs	1 Lacs	1 Lacs	1 Lacs	1 Lacs	1 Lacs

All the activities listed above are for community development as a whole and not for individual person or a family. Each development initiative will be implemented in close collaboration with the village Panchayat. The Project proponent may avail the services of a NGO for the implementation of the above programme, if felt needed.

Budget for Environmental Protection

Particulars	Capital Cost	Recurring Cost/ year in Rs.
Environmental Protection		
Dust Suppression	1,30,000	25,000
Tarpaulin and cover for stack of ore	1,00,000	15,000
Environmental Monitoring	1,40,000	30,000 (Air - 11,000 Water -9000 Soil and Noise- 10000)
Green Belt & Tree guards	80,000	30,000
Total	4,50,000	1,00,000

Budget for Occupational Health

Particulars	Capital Cost (Rs.)	Recurring Cost (Rs.)
For routine checkup	--	1,00,000
Infrastructure &PPE's	50,000	50,000

Budget for Water, Shelter and Sanitation for Mine Worker

Scheme	Capital Cost (In Rs)	Recurring Cost (In Rs)/year
Drinking water facility	75,000	50,000
Rest shelter	25,000	15,000
Sanitation (Urinal and Toilet)	50,000	35,000
Total	150,000	1,00,000

CORPORATE ENVIRONMENT RESPONSIBILITY

Corporate social responsibility (CSR) refers to responsibility of a company/ organization to ensure positive impact on environment, consumers, employees, communities, stakeholders and all other members of public sphere. The CSR activities are increasingly being taken up by the project proponent not only as fulfilling of mandatory provisions but also for the formation or enhancement of brand image. Besides the above, CSR is seen more as a responsibility towards society rather than a business promotion activity. It is the need of the

day for expansion of occupational welfare. This will not only improve the socio-economic status of the people living in the nearby areas but also enhance the reputation of the project proponent among the local people.

Year wise allocation of funds for the above activities proposed to be taken up by the project proponent is provided in the table below:

Table 8.1: Year wise tentative allocation of funds for the various activities proposed to be taken up by the project proponent under CSR program

Activities under CER	Expenditure
Installation of Rain water harvesting system in the school premises	80,000
R.O. Will be installed in the school for drinking purpose	20,000
Separate water tanks for toilet of boys and girls will be constructed in school	20 000
Plantation along with tree guards	44,000
Total	164,000/-

All the activities listed above are for community development as a whole and not for individual person or a family. Each development initiative will be implemented in close collaboration with the Village Pradhans. The Project proponent may avail the services of a NGO for the implementation of the above program, if felt needed. All the activities listed above are for community development as a whole and not for individual person or a family.

CONCLUSION

As discussed, it is safe to say that the proposed facilities are not likely to cause any significant impact to the ecology of the area, as adequate preventive measures will be adopted to keep the various pollutants within the permissible limits. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to serve as biological indicators for the pollutants released from the premises of "Nardaha Low grade Limestone Quarry."