PRE-FEASIBILITY REPORT

For

TERMS OF REFERENCE

OF

CHHOTE KADMA LIMESTONE MINE

At village- Chhote Kadma, Tahsil- Darbha (Jagdalpur),

District- Bastar, Chhattisgarh

Area – 2.43 hectares

Proposed capacity: - 22,000.05 TPA

PROJECT PROPONENT:

Mr. Rafik Khan
C/o:- Istiyak Khan
Opposite Jama Maszid, P.O. - Jagdalpur,
District-Bastar, Chhattisgarh
Pin code – 494001

Environment Consultant:

PMS
PRESERVING TOMORROW

P&M Solution

(Accredited by QCI/NABET)
C-88, Sector 65, Noida

PRE-FEASIBILITY REPORT

1.0 EXECUTIVE SUMMARY

1.1 Introduction

Chhote Kadma Limestone Mine is situated near village- Chhote Kadma, Tahasil- Darbha (Jagdalpur), District- Bastar, Chhattisgarh (Khasra No. 199 Part) over an area of 2.43 ha. The LOI has been issued in favour of Mr. Rafik Khan vide order no F-3-348/2001/khanij, Raipur dated 24.07.2002 for a period of twenty (20) years. The mining lease was executed on 12.08.2002 for 20 years (i.e, 12.08.2002 to 11.08.2022. The copy of LOI is attached as ***Annexure***. The Mining plan period was 2002 to 2007, first scheme period was 2002 to 2007 & second was 2012 to 2017. Proposed rate of production is 22,000.05 TPA of Limestone. The estimated project cost is Rs 45 lakh

This is a case of violation as the mine leases continue to operate without obtaining Environmental Clearance after 15.01.2016.

This project attracts general condition as Kanger valley National Park within 5.0 km radius (at approx 1.72 km in SE direction) from the project site. So, this mining project falls under **Category "A"** project or activity 1(a) as per EIA Notifications 2006 & its subsequent amendments.

1.2 Salient Features of the Project

<table>
<tr><td>Project Name</td><td colspan="3">Chhote Kadma Limestone Mine (2.43 ha)</td></tr>
<tr><td>Location of mine</td><td colspan="3">Village: Chhote Kadma, Tahasil- Darbha (Jagdalpur), District- Bastar, State - Chhattisgarh</td></tr>
<tr><td>Site co-ordinate</td><td>Boundary point</td><td>Latitude</td><td>Longitude</td></tr>
<tr><td></td><td>RK01</td><td>18°58’13.09443”N</td><td>81°51’05.13721”E</td></tr>
<tr><td></td><td>RK02</td><td>18°58’12.55821”N</td><td>81°51’06.75362”E</td></tr>
<tr><td></td><td>RK03</td><td>18°58’12.01814”N</td><td>81°51’08.37123”E</td></tr>
<tr><td></td><td>RK04</td><td>18°58’11.92441”N</td><td>81°51’08.67962”E</td></tr>
<tr><td></td><td>RK05</td><td>18°58’13.49993”N</td><td>81°51’09.32043”E</td></tr>
<tr><td></td><td>RK06</td><td>18°58’14.93762”N</td><td>81°51’09.92524”E</td></tr>
</table>

	RK07	18°58'16.45321"N	81°51'10.56242"E
	RK08	18°58'17.95082"N	81°51'11.19243"E
	RK09	18°58'19.25764"N	81°51'11.73960"E
	RK10	18°58'19.66441"N	81°51'10.08361"E
	RK11	18°58'19.83231"N	81°51'08.77681"E
	RK12	18°58'18.37922"N	81°51'08.01123"E
	RK13	18°58'16.93924"N	81°51'07.24682"E
	RK14	18°58'15.48842"N	81°51'06.47284"E
	RK15	18°58'14.02680"N	81°51'05.70243"E
Toposheet number	65F/13		
Proposed area	2.43 hectares		
Minerals of mine	Limestone		
Total geological reserves	4,59,541.89 tons.		
Total mineable reserves	2,27,516.26 tons		
Life of mine	11 years		
Proposed production of mine	22,000.05 TPA		
Method of mining	Open cast semi mechanized method		
No of working days	240 days		
Water demand	7.5 KLD		
Sources of water	Private water tanker		
Man power	45 nos.		
Nearest Railway Station	Tokapal Railway Station, approx 5.0 kms in NE direction		
Nearest State Highway/National Highway	NH-16, approx, 4.0 km towards North Direction		
Nearest Airport	Maa Danteshwari Airport Jagdalpur, Approx. 22 Km in NE direction.		
Seismic Zone	Zone II		

1.3 Proposed Planning

Mining method	Open Cast semi mechanized
Project cost	45 Lakh
Production	22,000.05 TPA

2. INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

2.1 Identification of project and project proponent

Chhote Kadma Limestone Mine is situated near village- Chhote Kadma, Tahasil- Darbha (Jagdalpur), District- Bastar, Chhattisgarh over an area of 2.43 ha. The quarry lease holder is Mr. Rafik Khan.

Project proponent:-

Mr. Rafik Khan
C/o- Istiyak Khan,
Add.-Opposite Jama Maszid, P.O. – Jagdalpur
District – Bastar, Chhattisgarh
Pin code – 494001

2.2 Brief Information about the project

The project proposes mining of 22,000.05 TPA of Limestone by opencast semi mechanized mining method over an area of 2.43 ha. The total geological reserves of Limestone are 4,59,541.89 tons. The expected life of the mine is 11 years.

2.3 Need for the project and its importance to the country or region

The mineral Limestone a notified mineral is found localized and a major raw material for production & cement. The occurrence is site specific. The project will be a source of supply of cement Plant. The limestone will be supplied to cement plants. It will not only provide employment to local populace but also benefit to the State in the form of Royalty and fund in district mineral foundation for use in CSR activity and development of the project located district.

2.4 Demands-Supply Gap

The region is a major hub for cement & refractory plants. The ML area full fills the requirements and hence the demand is always adequate and more than supply.

2.5 Imports vs. Indigenous Production

As far as Limestone production is concerned with reference to the importing of the Limestone, it is advantageous to mine the mineral rather than importing the same.

2.6 Export Possibility

The Limestone excavated from ML area will be marketed locally and there is no export possibility for the Limestone. The Limestone excavated from the Chhote Kadma mines will be cleaned up, after cutting, sizing, finishing, these will be exported to decorate ornamental design, artifacts, monuments, building as per market demand.

2.7 Domestic/ Export Markets

Domestic Market

The proposed mining activity is for obtaining Limestone for sale to nearby cities and towns located in the state of Chhattisgarh.

Export Market

No export market exists of the available grade.

2.8 Employment Generation

The total manpower requirement for the operation of the decorative mine will be about 45 nos. Administrative staff & supervisory personnel, skilled/ semi-skilled/unskilled labours will be employed during operation of mine.

Employment potential of the proposed project is given below:

Table 1: Detail of Manpower

Designation	Nos
Mines Manager	1
Full time geologist	1
Full time Mining Engineer	1
Supervisor	1
Skilled worker	16
Unskilled works	25
Total	**45**

3. PROJECT DESCRIPTION

3.1 Type of project including interlinked and interdependent projects, if Any.

The project is Chhote Kadma Limestone Mine over an area of 2.43 ha. It is an independent project it is not interlinked with other project. This project attracts general condition so far as Kanger valley National Park within 5.0 km radius (at approx 4.07 km in SE direction). So, this mining project falls under **Category "A"** Project or activity 1(a) as per EIA Notifications 2006 & its subsequent amendments.

3.1 Location

The mining lease area is located at village- Chhote Kadma, Tahasil- Darbha (Jagdalpur), District- Bastar, Chhattisgarh.

Fig no- 1, Vicinity Map

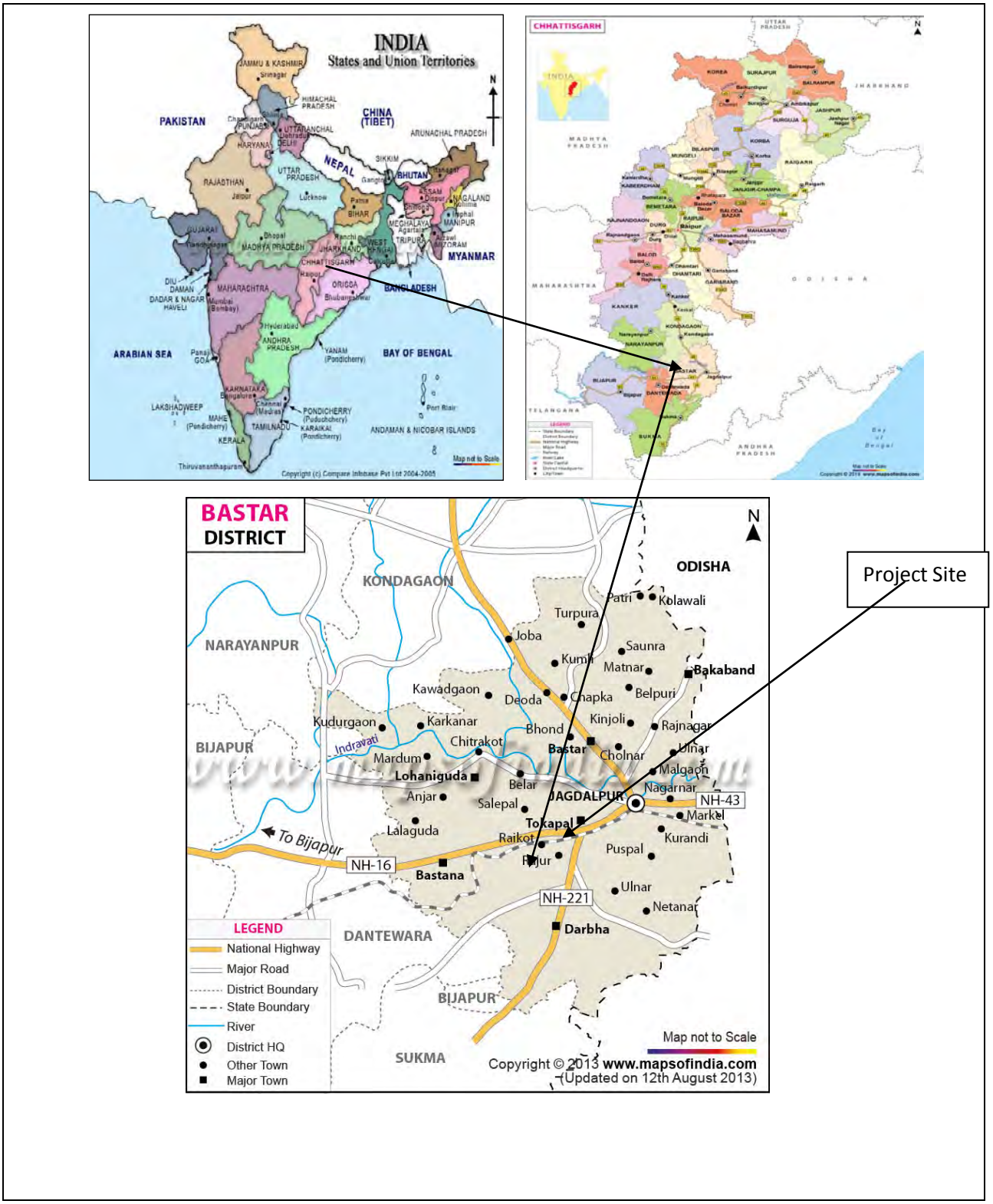

Fig no 2, Location map

3.3 Details of Alternate Sites

Not Applicable.

3.4 Size or Magnitude of operation

3.4.1Topography:

Topographically, the area is undulating with mounds/hillock limestone, The drainage pattern is parallel to sub parallel type. The one fourth of the lease area is a hillock in NE direction and remaining is a gentle slope in south direction. The average thickness of soil cover is about 1.0 m in the south part of the lease area. The highest elevation is 600m MSL in North East and the lowest is 565m MSL in south direction of the lease area.

There is no drainage in the lease area. But rain water is drain out from SW direction of the lease area due to 2 to 30 slope in this direction. A road is passing by western side of the lease area.

Source- Approved Mining scheme

3.4.2. Geology of the lease area

The three fourth of the lease area is a hillock in NE direction and remaining is gentle slope in NW direction. The highest elevation is 600 m/MSL in north east and the lowest is 565m MSL in south direction of the lease area. Generally the limestone is light pink and white in colour and massive in nature.

The local topography of the lease area is mound/hillock. The limestone deposit and associated formation which is occurring at Chhote Kadma village is forming part of extremity of belongs to Kanger formation of Indrāvati Group. Limestone deposit is almost horizontally bedded with local dips from 2 to 3 towards SW. Strike direction of the limestone bed is north-east to south-west in the area as observed in the quarries.

Litho logical Characteristics:

Litho logical Characteristics of locally occurring formations in the lease area described below:

Soil-Clay /Laterite,

Pank / Grey Limestone

Limestone:

Generally the limestone is light pink and white in colour and massive in nature. The contact between limestone and shale about 500m due south of Raikot. The limestone outcrops mostly horizontal, though at places 2º to 3º dip due SE has been recorded. It is also fractured and jointed. The two sets of joints in N-S and are common.

Soil-Clay /Lateritic:

Laterite is a product of weathering of all alder formations, In the area, it covers considerably large part of the area. The laterite capping is noticed due south of Raikot. The Nala cover is filled up with younger alluvium of sandy nature.

The general soil is reddish to brown and lateritic in nature. Occupying the Pains of surveyed area. Clay at various places is seen. Mostly filling the cavities limestone.

Local Geology

The local topography of the lease area is mound / hillock. The limestone deposit nd associated formation which is occurring at Chhote Kadma village is forming Bart of extremity belongs to

Indrāvati Group. The limestone deposit is almost horizontally bedded with local dips from 20 to 30 towards Sw. Strike direction a the limestone bed is north-east to south-west in the area as observed in the quarries.

The stratgraphy sequence is as followed-

Group	Formation	Lithology
Indravati	Recent	Soil/Laterite, Clay
	Kanger	Pink, Gray Limestone
	Cherakur	Purple brown shale
	Tirathgarh	Quartzite/ Sand Stone

Kanger Limestone: The outcrops of Kanger limestone area prominent due south of Raikot at a distance of almost a kilometer in nala bed. These outcrops from a cylindrical shape and are about 6km long, extending uptoChitapur village. Its average width is about a kilometer.

Another important occurrence of these limestone outcrops is due south of Rejur village in the form of small mound and hillocks which extends for about Semup to the south and wests of village Kandkigudi. Its average width is also bout a kilometer.

Generally the limestone is light pink and white in colour and massive in nature. The contact between limestone and shale about 500m due south of Raikot. The limestone outcrops are mostly horizontal, though at places 2^0 to 3^0 dip due SE as been recorded. It is also fractured and jointed. The two sets of joints in N-S and are common.

Source- Approved Mining scheme

Reserve Estimation

The resource/ reserve of the applied area has been calculated based on the cross sectional area method.

Geological Resource - 4,59,541.89 tons.

Total Mineable reserve estimated = 2,27,516.26 tons (204764.63 tons, 90% recoverable)

Anticipated life of the mine:

The anticipated life of mine is 11 years of lease period.

3.4.3. Production Parameters

Table 2:Previous production detail

Sr. no.	Year	Production (in Tons)
1	01.07.2002 to 31.12.2002	782 MT
2	01.01.2003 to 31.12.2003	3794 MT
3	01.01.2004 to 31.12.2004	6523 MT
4	01.01.2005 to 31.12.2005	9238 MT
5	01.01.2006 to 31.12.2006	7826 MT
6	01.01.2007 to 31.12.2007	5232 MT
7	01.01.2008 to 31.12.2008	3142 MT
8	01.01.2009 to 31.12.2009	1238 MT
9	01.01.2010 to 31.12.2010	1132 MT
10	01.01.2011 to 31.12.2011	2261 MT
11	01.01.2012 to 31.12.2012	2900 MT
12	01.01.2013 to 31.12.2013	8287 MT
13	01.01.2014 to 31.12.2014	9787 MT
14	01.01.2015 to 31.12.2015	3426 MT
15	01.01.2016 to 31.12.2016	4195.780 MT
16	01.01.2017 to 31.12.2017	1468.539 MT
17	01.01.2018 to 31.12.2018	00 MT
18	01.01.2019 to 31.12.2019	00 MT
19	01.01.2020 to 31.12.2020	00 MT
20	01.01.2021 to 16.06.2021	00 MT

The proposed production detail for the plan period, along with waste is given below:

Table 3: Production detail

Year	Total Volume in m^3	Limestone (ROM) (tons)	Saleable ore (tons) (90%)	Waste chips (tons) 10%
1st	8000.01	20000.02	18000.02	2000
2nd	8200.02	20500.05	18450.05	2050
3rd	8400.00	21000.00	18900.00	2100
4th	8600.01	21500.02	19350.02	2150
5th	8800.02	22000.05	19800.05	2200
Total	**42000.06**	**105000.14**	**94500.14**	**10500**

Proposed Production : 8800.02 cu.m/annum or 22,000.05 TPA of limestone

Total excavation proposed to be handled- 42,000.06 cu.m or 1,05,000.14 tons in five years

Total soil/OB to be handled- 3166.94 Tons in five years

Total waste (waste chip) generation- 10,500 Tons in five years.

Total waste generation including OB & waste chips:- 6,733.56 cu.m or 13,666.94 tons in five years

3.5 Project description with process details

3.5.1 Method of Mining

The mining will be carried out by opencast semi mechanized method with adoption of drilling & blasting. Drilling operation will be done with the help of Jack hammer drill with compressed air. Face cleaning, sorting sizing & loading or ore will be done by semi mechanized method. The height of the benches of the quarry will be kept 3 mtr and width will be r more than the height. The gradient of the haul road will be maintained at 1:16 with more width than other benches for easy mobilization.

Mining parameters:

Bench height	3 m
Bench width	More than height
slope of benches	90º
gradient of the haul road	1:16

Maximum and minimum depth of workings

The expected depth of the proposed quarry will be up-to 564.4 mRL which will not encounter the water table.

Details of Machinery:-

Open cast semi mechanized method has been proposed. During development, hydraulic excavators will be used while developing. Tipper trucks will be used for transporting metal stone and waste. This machine will be used on hire basis as below-

S.No.	Particular	Capacity / Make	No.
1.	Compressor	600 cmf / IR (450)	4
2.	Jack Hammer	35mmDia / Standard	2
3.	JCB	3 cu.m.	1
4.	Jeep	Mahindra	1

3.5.2 Drilling

Drilling will be carried out by using jack hammers driven by air compressors as per the requirements adhering to the drilling norms. Both vertical and horizontal holes will be done to expedite wire saw cutter to detach the stone blocks from the quarry face. The depth of the hole is proposed to be 1.0- 1.2 m and diameter will be 35 mm.

Blasting:

There will be very limited blasting.

Parameters	
Depth of hole	1.0-1.2 m depth
Dia of hole	35mm dia
Spacing pattern	0.9-1.0m
Charge per hole	250 g ms- 300 g ms o f gu npowder a long w ith suitable length of safety fuse.
Burden spacing	0.9-1.0m
Powder factor	5 – 6 t/kg
Explosive consumption	5kg per r ound f or 12 -15 h oles & 150 m o f safety fuse. M onthly c onsumption w ill be around 35-40 kg of gunpowder.

3.6 Raw material required along with estimated quantity, likely source, marketing area of final product/s, mode of transport of raw material and finished product

No raw material will be required for production of Limestone.

3 .7 Resource optimization/ recycling and reuse

Not envisaged.

3.8 Availability of water its source, energy/ power requirement and source

3.8.1 Water Requirement

Water for drinking and operations is required to be 7.5 KLD. Water will be sourced from the bore well and mine sump.

3.8.2 Power

Electricity facility is available in the applied area. Nearest electricity facility is available at Chhote Kadma Village.

3.9 Quantity of wastes to be generated (Liquid and Solid) and scheme for their management/ disposal

3.9.1 Solid waste generation & its disposal

Waste management:

During the proposed plan period total 6,733.56 cu.m or 13,666.94 tons of soil/OB/waste (3166.94 tons of soil/OB & 10,500 tons of mineral rejects) will be generated. Generated OB/ waste will be stacked along the lease boundary in the mining limit & use for the plantation & backfilling in the 7.5m barrier zone about total area of 0.07 ha with dump height 3.0 m.

Year	Soil / OB (T)	Waste chips (tons) 10%
1st	171.87	2000
2nd	-	2050
3rd	2995.07	2100
4th	-	2150
5th	-	2200
Total	**3166.94**	**10500**

3.9.2 Liquid effluent

The domestic sewage will be collected by sewerage system and biological treatment will be adopted by means of septic tanks and soak pits.

4.0 SITE ANALYSIS

4.1 Connectivity

The mine site is well connected via approach road of approx. 230 m which further connects mettaled road in West direction. The applied area is 27 kms away from Bastar. Tokapal Railway Station is at approx 5.0 kms in NE direction. National Highway 16 is about 4.0 km in North direction. Nearest Airport is Maa Danteshwari Airport Jagdalpur, Approx. 22 Km in NE direction.

4.2 Landform, land use and land ownership

4.2.1 Landform

The mining lease area is undulating with mounds/hillocks of limestone. The deposit is having highest altitude of 600 m RL (N) and the lowest altitude value of 565 mRL (S).

4.2.2 Land Use

The area is under mining operation. Land acquired for mining activity and other infrastructures have been given below. The land use at present, at the end of plan period is given below:

Sl. No	Pattern of Utilization	Area put on use at the start of Plan period (Ha)	Area required during Plan Period (Ha)	Conceptual period (ha)
1	Mining & allied Area under pits	1.377	1.938	1.938
2	Area for dumping	Nil	0.080	0.10
3	Area for waste dump (temp)	Nil	0.276	Nil
4	Area for pit road	0.025	0.025	Nil
5	Infrastructure	0.015	0.010	0.015
6	Plantation	0.015	0.115 on dump	0.150
7	Mineral storage (temp)	Nil	Nil	Nil
8	Area reclaimed/backfilled	Nil	Nil	0.90
9	Crushing plant	0.040	0.40	Nil
10	Township area	Nil	Nil	Nil
11	Magazine house	0.002	Nil	Nil
12	Virgin area	0.820	Nil	Nil
Grand Total		**2.43**	**2.43**	**2.43**

Conceptual period :- At conceptual period approx. 2.228 ha area will be excavated. Ultimate pit limit will be 564.4 mRL. This area will be converted into water reservoir. All dump of soil will be used for afforestation.

4.2.3 Land Ownership

Mine is situated near village- Chhote Kadma, Tehsil – Darbha (Jagdalpur), District – Bastar, Chhattisgarh over an area of 2.43 hectares.

Village	Khasra No.	Area (ha)	Land type
Chhote Kadma	199 part	2.43	Govt waste land

4.3 Topography

Topographically, the area is undulating with mounds/hillock limestone, The drainage pattern is parallel to sub parallel type. The one fourth of the lease area is a hillock in NE direction and remaining is a gentle slopein south direction. The average thickness of soil cover is about 1.0 m in the south part of the lease area. The highest elevation is 600m MSL in north cast and the lowest is 565m MSL in south direction of the lease area.

Source- Approved Mining scheme

4.4 Existing Land Use Pattern

Though the land covered for quarry lease is 2.43 ha. This is waste land.

4.5 Existing Infrastructure

The National Highway 16 is about 4.0 km in North direction. Nearest Airport is Maa Danteshwari Airport Jagdalpur, Approx. 22 Km in NE direction. Manpower is easily available. There is no infrastructure existing within the QL area. Post office is at Chhote Kadma, Police station is at Bastar. Hospital and education facility is available at Darbha (Jagdalpur).

4.6 Soil Classification

The soils in the district are having wide variations. Most of the area is covered by red gravelly, red sandy and loamy Alfisols. As most of the area is covered by crystallines and metamorphic rocks the soils derived by weathering are red soils.. At some places Ultisols in the form of laterites are also present.

Source- *http://cgwb.gov.in/District_Profile/Chhatisgarh/Bastar.pdf*

4.7 Climatic and rainfall data

The normal annual rainfall for the district is 1386.77 mm. The annual temperature varies from 10.6^{o}C in winter to 46 ^{o}C in summer. The relative humidity varies from 90% in rainy season to 30-40% during winter

Source- *http://cgwb.gov.in/District_Profile/Orissa/BASTAR.pdf*

5. PLANNING BRIEF

5.1 Planning Concept

It is open cast semi mechanized mine. The loading of Limestone shall be carried out by excavator. Mining shall be carried out from top to down ward through the formation of the benches.

5.2 Land use Planning

Ffollowing are the land use pattern.

Sl. No	Pattern of Utilization	Area put on use at the start of Plan period (Ha)	Area required during Plan Period (Ha)	Conceptual period (ha)
1	Mining & allied Area under pits	1.377	1.938	1.938
2	Area for dumping	Nil	0.080	0.10
3	Area for waste dump (temp)	Nil	0.276	Nil
4	Area for pit road	0.025	0.025	Nil
5	Infrastructure	0.015	0.010	0.015
6	Plantation	0.015	0.115 on dump	0.150
7	Mineral storage (temp)	Nil	Nil	Nil
8	Area reclaimed/backfilled	Nil	Nil	0.90
9	Crushing plant	0.040	0.40	Nil
10	Township area	Nil	Nil	Nil
11	Magazine house	0.002	Nil	Nil
12	Virgin area	0.820	Nil	Nil
Grand Total		**2.43**	**2.43**	**2.43**

Conceptual period :- At conceptual period approx. 1.938 ha area will be excavated at the end of mine. Ultimate pit limit will be 564.4 mRL. This area will be converted into water reservoir. All dump of soil will be used for afforestation.

5.3 Assessment of Infrastructure Demand (Physical & Social)

Presently no infrastructures have developed in the applied area. The daily needs facilities are available in Chhote Kadma Villages while the other requirements are easily from Bastar.

5.4 Amenities/Facilities

Mines office, workshop etc.

Proper site services such as First Aid, Canteen / Rest Shelter, Drinking Water, Maintenance Workshop, etc. will be provided to the mine workers.

6. PROPOSED INFRASTRUCTURE

6.1 Industrial Area (Processing Area)

No infrastructure is proposed.

6.2 Residential Area (Non Processing Area)

As the local person will be given employment, no residential area/ housing is proposed.

6.3 Green Belt:

About 900 Plants are proposed to be planted during plan period. Plantation will be done in barrier zone of the lease area. Separate toilet for male and female will be constructed. The area of plantation is marked and shown on plate of EMP. Plantation of wide leaf trees, tall grasses around the quarry pits, on OB dumps and also around the offices, are proposed.

Year	Total
1st	900
2nd	Maintenance
3rd	
4th	
5th	
Total	900

At the end of mine life approx. 2000 saplings will be planted.

6.3.1 List of plant species recommended for plantation

The plants recommended for afforestation are as per Guidelines for Developing Greenbelts, CPCB, March, 2000.

6.4 Social Infrastructure

During the plan period mine office, separate toilet for men and women and shelter room will be constructed and first aid facility will be enhanced.

6.5 Connectivity

The mine site is well connected via approach road of approx. 230 m which further connects mettaled road in West direction. The applied area is 27 kms away from Bastar. Tokapal Railway Station is at approx 5.0 kms in NE direction. National Highway 16 is about 4.0 km in North direction. Nearest Airport is Maa Danteshwari Airport Jagdalpur, Approx. 22 Km in NE direction.

6.6 Drinking Water Management

Water for drinking and operations will be **7.5 KLD**.

S. No.	Purpose	Water Requirement(KLD)
1.	Drinking & Domestic Use	2.5
2.	Dust Suppression	1.5
3.	Green belt development	3.5
	Total	**7.5**

6.7 Sewerage System

Domestic waste water will be treated into septic tank followed by soak pit.

6.8 Industrial Waste Management

Not applicable.

6.9 Solid Waste management

During the proposed plan period total 6,733.56 cu.m or 13,666.94 tons of soil/OB/waste (3166.94 tons of soil/OB & 10, 500 tons of mineral rejects) will be generated. Generated OB/ waste will be stacked along the lease boundary in the mining limit & use for the plantation & backfilling in the 7.5m barrier zone about total area of 0.07 ha with dump height 3.0 m.

6.10 Power Requirement & Supply/ Source

All the activities will be done in day time and if required will be taken from CG Electricity control Board

7. REHABILITATION AND RESETTLEMENT (R&R) PLAN

In the conceptual period area will be developed up to 564.4 mRL at the end of plan period.

The total area degraded at ultimate stage shall be rehabilitated by developing water reservoir & plantation. The quarry floor will be reclaimed by means of back filling at the end of mine life.

8. PROJECT SCHEDULE & COST ESTIMATES

8.1 Likely date of start of construction and likely date of completion

The project will commence after grant of environmental clearance.

8.2 Estimated project cost along with analysis in terms of economic viability of the project

The estimated project cost will be Rs. 45 lakh.

9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

9.1 Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.

The project will prove beneficial to the people as the company has already made the infrastructural facilities for the local people like Educational facilities, Medical facilities, Transportation facilities etc. as well the local people especially tribal population will be taken as employers which will improve the socioeconomic environment of the area.

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