

# **EXECUTIVE SUMMARY**

**OF  
4.30 MTPA LIMESTONE PRODUCTION**

**AT  
Mine Lease in Yadwad & Kunnal Villages,  
Gokak & Ramdurg Taluks  
Belgaum district, Karnataka**

**CAPTIVE LIMESTONE MINE-1228.63 Ha  
(Non -Forest Land)**

**OF  
Dalmia Cement (Bharat) Limited**

## **EXECUTIVE SUMMARY**

### **1.1 INTRODUCTION**

**DALMIA CEMENT (BHARAT) LIMITED (DCBL)** is constructing a Greenfield Cement plant of capacity 4.0 MTPA (2.6 MTPA clinker) & 40 MW Captive Power plant near Yadwad village in Gokak taluk of Belgaum district, Karnataka. Environmental Clearance has been obtained for the same vide letter no. J-11011/119/2007-IA-II (I) dated 24<sup>th</sup> June, 2008. The limestone requirement of the plant will be met mainly from the proposed captive mining lease of 1228.63 ha near villages Yadwad & Kunnal of Gokak & Ramdurg talukas in Belgaum district. It is proposed to mine 4.3 Million TPA (MTPA) of limestone from the proposed Mining lease.

### **1.2 PRESENT PROPOSAL**

DCBL proposes to mine limestone to the tune of 4.3 MTPA from its captive mining lease area spread over an area of 1228.63 ha at Yadwad (Gokak) & Kunnal (Ramdurg) Village, Gokak & Ramdurg Tehsil, Belgaum district. This mine will be the main source for supply limestone to its Greenfield Cement Plant.

MoEF has issued Terms of Reference to DCBL vide letter no. J-11015/36/2009-IA,II (M), dated 30<sup>th</sup> April 2009 for 1157.26 ha mine. This was based on the granted LOI for the area of 1157.26 ha by Govt. of Karnataka vide letter no DMG/MQS/384/AML/07 -08/14362 dated 22/01/2008.

Subsequently, Govt. of Karnataka has revised the LOI vide letter no. DMG:MLS: 384 AML 07:11-12 dated 24<sup>th</sup> Feb 2012 to 1228.63 ha mine including some of internal areas which were earlier deleted within the same boundary. The same TOR are reiterated by MoEF with increased lease area (1228.63 ha) vide letter dated 13.07.2012.

The estimated cost of the project is about Rs. 72 Crores.

### **1.3 PROJECT PROPONENT**

Dalmia Cement is one of the leading cement producers of India. The group was founded in 1935 and cement division was established in 1939 which enjoys a heritage of over 77 years of expertise and experience. The First Cement Plant the group was established in 1939 at Dalmiapuram, Tamil Nadu.

- The Group has cement plants in Tamil Nadu (Dalmiapuram & Ariyalur) and Andhra Pradesh (Kadapa) and Meghalaya (Thangskai) and also have 50% stake in Calcom Cement India Ltd, Assam and 45.4 % stake in OCL India Ltd., Odisha.
- The Group now controls a cement capacity of 17.85 million tonnes & has a strong presence in Southern, Eastern & North East Regions of the Country.
- A multi-spectrum Cement player and a pioneer in super specialty cements used for Oil wells, Railway sleepers and Air strips.

- Set up over 53 windmills in Muppandal (Tamil Nadu) to generate eco-friendly captive power for our plant. This power is wheeled through the State utility transporter for consumption at the plant.
- DCBL prides itself on having been at the forefront of pioneering and introducing many new technologies, which exist today, which are followed by others in the industry.

The group has bagged various National Awards like:

- Best Improvement in Electrical Energy Performance-National Award for Energy Efficiency in Indian Cement Industry by National Council for Cement and Building Materials in the Year 1999 & 2002.
- A National Award for Environmental Excellence in Limestone Mines in Indian Cement Industries by National Council for Cement and Building Materials in the Year 2000-01.
- First Place in Energy Conservation in the Cement Sector-National Energy Conservation Award by Bureau of Energy Efficiency, Ministry of Power, New Delhi in 2001 & 2002.
- Chosen by Confederation of Indian Industry (CII) as a Model Plant for Energy Efficiency in the Year 2003.
- Leadership & Excellence Award in Safety, Health & Environment - Awarded by CII in the Years 2003 & 2004 - Commendation in SHE Performance.
- A National Award for Second Best Environmental Excellence in Plant Operation in Indian Cement Industries (2003-04) by NCCBM.
- Best Energy Efficient Unit Award - Awarded by CII in the year 2012-2013
- Green Award- Awarded by Govt. of Tamil Nadu in the year 2012-13
- Manufacturing Today Award for Excellence in Human Resources- Awarded by ITP publishing India in the year 2012-13
- CII-ITC Sustainability Awards –Awarded by CII in the year 2012-13.

#### **1.4 EIA Study**

As per EIA Notification 2006 and subsequent amendments, all Mining of Minerals in >50 Ha (in respect of Non-coal Mine Lease) have been kept at Sl. No. 1 (a) under Category 'A' for the Environmental Clearance.

The Project Proponent has entrusted M/s. B.S. ENVI-TECH Pvt. Ltd. Hyderabad as consultant for EIA-EMP Study. The EIA Consultant has been accredited by Quality Council of India, National Accreditation Board for Education & Training (NABET).

The EIA Report has been prepared as per the generic structure proposed in EIA Notification 2006 incorporating the ToR Awarded by MoEF vide letter no. J-11015/36/2009-IA,II (M), dated 30<sup>th</sup> April 2009.

#### **2.0 Project Profile**

The Lease area, under reference is a relatively flat terrain with minor undulations. The geology of the area belongs to lower Kaladgi Series equivalent to Cuddapah Formation. The general trend of the basin is NNW – SSE with steep dipping of 80° due North. The deposit is tectonically disturbed and show alternate beddings of Dolomite and Limestone. Lease area forms part of the lower Kaladgi Formation. The Kaladgi limestone of the lease area is as exposed near the surface.

The thickness of the limestone beds ranges from 10 to 30 m. Soil thickness ranges from 0 to 2.0 m at different places. Most of the area is covered by black cotton soil.

The mine will be operated by means of opencast method conventional system of mining, which includes drilling, blasting, loading and transportation.

The benches shall be of 9 m height with a width of 27 m. The benches shall be sloped at 80°-75° to the horizontal as the formations are very hard with moderate to steep dip.

For drilling, pneumatically operated wagon drills will be used in combination with the diesel-operated compressors. The diameter of drill hole will be 150 mm. The depth of the holes will vary from 9 m to 10 m.

Deep hole blasting will be carried out with Slurry Explosives and ANFO. Electric delay detonators with detonating fuse will be used for charging of holes with explosives. As and when the necessity arises, even advanced technology of Non-electric initiation system of blasting with Shock Tube Detonators in combination with noise less trunk delays will also be used. Rock breaker may be used for liquidating the secondary boulders. The blasted material will be excavated with the Bucket Capacity of 6.5 m<sup>3</sup> hydraulic excavators. The excavated material will be loaded into the 55-65 tonnes dumper capacity and shall be transported to the crusher.

The total mineable limestone reserves estimated are about 68.29 million tonnes with the present exploration (excluding 0.85 ton Prefeasibility Mineral Resources of 221 & 222 UNFC category). With the available reserves, and at the annual production rate of 4.3 million tonnes, the deposit will have a life of about 19 years. However, the reserves are likely to get modified once further exploration is carried out and accordingly the life of the mine is expected to increase.

Mine site will be provided with a workshop/garage to undertake minor repairs and maintenance of loading and drilling equipments. The mines office will be located at the pit top. Mine will also be provided with first aid room, rest shelters, toilets, tool/store rooms, etc.

The details of proposed mining operations, overburden handling, limestone production and afforestation program has been planned accordingly which are as follows:

| Block Period (Yrs)  | Topsoil generation (m <sup>3</sup> ) | Waste generation (m <sup>3</sup> ) | Limestone production (tonnes) | Afforestation     |              | Backfilling  |                            |
|---------------------|--------------------------------------|------------------------------------|-------------------------------|-------------------|--------------|--------------|----------------------------|
|                     |                                      |                                    |                               | Area covered (ha) | No. of trees | Area (ha)    | Quantity (m <sup>3</sup> ) |
| 1-5 <sup>th</sup>   | 202810                               | Nil                                | 9801886                       | 10                | 15,000       | Nil          | Nil                        |
| 6-10 <sup>th</sup>  | 379063                               | 2372000                            | 21500000                      | 10                | 15000        | 8.00         | 2372000                    |
| 11-15 <sup>th</sup> | 379063                               | 2372000                            | 21500000                      | 10                | 15000        | 8.00         | 2372000                    |
| 16-19 <sup>th</sup> | 379063                               | 2372000                            | 16738114                      | 8.17              | 12255        | 8.00         | 2372000                    |
| <b>Total</b>        | <b>1340000</b>                       | <b>7116000</b>                     | <b>69540000</b>               | <b>38.17</b>      | <b>57255</b> | <b>24.00</b> | <b>7116000</b>             |

Out of the total lease area 1228.63 ha, only 241.72 ha will be mined out at the end of the life of mine.

### **3.0 DESCRIPTION OF ENVIRONMENT**

#### **3.1 Environmental Setting**

The Mining lease area falls in Survey of India topo sheet No. 47P /4 bounded by the following co-ordinates at an average elevation of 579 m above MSL:

Latitudes: N 16°09'58 - 16°13'21"

Longitudes: E 75°10'43" - 75°12'11"

The study area covers 10 km radius from the proposed mining lease boundary.

There are no eco sensitive areas like National Parks, Wildlife Sanctuaries, Biosphere Reserves, Elephant Corridor, Mangroves, Archaeological/ Historical Monuments, Heritage sites, etc. exist within 10 km radius area from the ML boundary. The four Reserve Forests within the 10 km radius which are as follows:-

- RF near Metgud – 7.2 km – NE
- RF near Petlur – 9.1 km – E
- RF near Budni Khura – 4.9 km – W
- RF near mallapur Mallapur – 10.5 km – ESE

An approach road existing within the applied area linking the existing Mining Leases of Shri B.B. Nyamagaundar (ML No. 2537) and M/s B.G.K. Sangha (ML No. 2428) with the nearest village Yadwad will be kept intact in view of the transportation of limestone raised from these two leases.

#### **3.2 Baseline Environmental Status**

As part of Environmental Impact Assessment study, baseline environmental monitoring was carried out for Post monsoon season 2012 covering months of September- November '12.

The predominant wind directions during the season were from WNW-W-WSW, accounting to 43.46% of the time with calm winds of less than 1.0 kmph for 2.69% of the time. The average wind speed during this period was generally above 10 kmph.

Ambient air quality of the study area has been assessed through a network of 10 ambient air quality locations.

Results of the ambient air quality at all the above locations were found to be well within the limits of National Ambient Air Quality (NAAQ) standards specified for Industrial, Rural, Residential and other areas. Concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are mainly contributed due to vehicular traffic, and local activities. The following is the summary of ambient air quality of the study area

### Summary of Ambient Air Quality ( $\mu\text{g}/\text{m}^3$ )

|  | 98 <sup>TH</sup> PERCENTILE VALUES |                   |                 |                 |
|--|------------------------------------|-------------------|-----------------|-----------------|
|  | PM <sub>10</sub>                   | PM <sub>2.5</sub> | SO <sub>2</sub> | NO <sub>x</sub> |
| Study Area   | 56-63                              | 24 - 35           | 10.2 – 11.2     | 11.2 – 12.5     |
| NAAQ standards for Industrial, rural and residential areas | 100                                | 60                | 80              | 80              |

*Note: CO values are observed less than 1 ppm during study period.*

Noise levels were monitored at 10 locations in the study area. Noise levels recorded were found to be in the range of 49.3-53.9 dB (A) during day time and in the range of 40.6-43.4 dB (A) during night time in the buffer zone.

Analysis of water samples collected showed that the values of water complies with the drinking water standards of IS 10500 except for Chlorides here and there.

The most dominant type of soil in the area is the Black-cotton soil. Soil samples were collected from 8 locations for assessing the quality. Soil samples showed average to good fertility.

There are no rare or endangered flora/fauna species in the study area. Socio-economic status of the study area is found to be moderate.

#### **4.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

##### **4.1 AIR ENVIRONMENT**

The air borne particulate matter is the main air pollutant contributed by opencast mining. The mining activities may result in increase in dust (SPM) concentrations in mining lease area and surrounding area. The sources of fugitive dust emissions in opencast mines are drilling sites, blasting and vehicular movement on haul roads. The smoke from the use of HEMM equipments and tippers will also contribute to the generation of Sox and NOx. SO<sub>2</sub> and NO<sub>x</sub> emissions due to the proposed mining activities and their predictions were found to be insignificant.

Ground level concentrations due to the mining activities have been estimated to predict the incremental rise and distance of impact in the study area.

Predictions have been carried out for the worst-case scenario using modelling techniques with the help of AERMOD.

In order to predict the cumulative groundlevel concentrations, the emission from the Cement plant of capacity 4.0 MTPA (2.6 MTPA Clinker) & 40 MW Captive Power Plant are also considered.

Predicted maximum incremental 24-hourly average cumulative ground level concentrations with overall ground level concentration are given below:

**PREDICTED CUMULATIVE GROUND LEVEL CONCENTRATIONS AND  
OVERALL SCENARIO,  $\mu\text{g}/\text{m}^3$**

| <b>24-Hourly Concentrations</b>                            | <b>Particulate Matter-10 (PM<sub>10</sub>)</b> | <b>Particulate Matter-2.5 (PM<sub>2.5</sub>)</b> | <b>Sulphur Dioxide (SO<sub>2</sub>)</b> | <b>Oxides Of Nitrogen (NO<sub>x</sub>)</b> |
|--|--|--|---|--|
| Baseline concentration, max                                | 63   | 35   | 11.5                                    | 12.6                                       |
| Predicted Groundlevel Concentration (Max)                  | 12.8   | 1.94   | 18.0                                    | 19.50                                      |
| Overall Scenario   | 75.8   | 36.94  | 29.5                                    | 32.10                                      |
| NAAQ standards for Industrial, rural and residential areas | <b>100</b>                                     | <b>60</b>  | <b>80</b>                               | <b>80</b>                                  |

**AIR POLLUTION CONTROL MEASURES**

The environmental control measures which are proposed to control the fugitive dust are as follows:

- Prevention of dust getting airborne by spraying water on the dust generation points i.e mainly on haul roads and dumps with water tankers.
- Use of sharp drill bits with wet drilling (drill fitted with water mist system) to suppress the dust emission at its source.
- Controlled techniques of blasting & Charging the holes by using optimum charge and using time delay detonator.
- Avoiding blasting during high windy periods.
- Regular grading of haul roads and service roads to clear accumulation of loose material.
- Avoiding over filling of dumpers and consequent spillage on the roads
- The vehicles and machinery will be kept in well-maintained condition.
- To arrest the amount of airborne dust, extensive plantation will be carried out all along the roads, mine peripheries etc.

**4.2 NOISE ENVIRONMENT**

The major noise source from the mines is drilling, blasting, movement of machinery and transport. The noise levels due to the Mine Equipment's operations would be maintained at <85 db(A) at a distance of 1.5 m from the sources. In general, noise generated by these sources will be within the prescribed limit of 90 dB(A) prescribed by Director General of Mines Safety (DGMS), Dhanbad.

Noise level at the boundaries would be maintained <55 dB(A) during day times and <45 dB(A) during night times, well within the CPCB Norms for Residential and Rural Areas.

During Blasting, for normal charge, the Peak Particulate Velocity (PPV) will be much lower than 12.5 mm/sec fixed for mines and the noise levels will be < 90 dB(A).

It is proposed to cover 62.17 ha area (including backfilled area) under afforestation in phased manner.

### **NOISE POLLUTION & GROUND VIBRATIONS CONTROL MEASURES**

The following noise & Ground vibrations abatement measures are proposed.

- Green Belt with thick foliage along roads and around lease boundary to act as acoustic barriers.
- Milli second delay detonators shall be used to give sufficient delay between holes so that number of holes blasted at a time is minimized, resulting in reduced noise and vibration.
- Blasting shall be carried out using optimum burden, charge and milli second delay detonators.
- Proper and regular maintenance of vehicles, machinery and other equipment.
- The workers employed will be provided with protection equipments, earmuffs and ear-plugs, as a protection from the high noise level generated at the mine site wherever required.

### **GROUND VIBRATION CONTROL MEASURES**

- Ground vibrations shall be continuously monitored during Blastings using a Seismograph.
- For normal charge, the Peak Particulate Velocity (PPV), shall be well within the limit value fixed for mines
- Optimization of blasting and staggered pattern will be used
- "Delay interval between rows of blast holes will be maximized whenever confinement is greater like corner of benches
- Delay period will be increased in the last rows
- Progress of blast (delay) will be opposite to the direction of house/ structures of importance
- Use of NON-Electric Initiation System.

### **4.3 WATER ENVIRONMENT**

The water requirement of the proposed mines is about 100 m<sup>3</sup>/day. This requirement is proposed to be met by the associated plant/bore wells and after development of the mine pit, DCBL will augment the mine pit water for meeting the requirements. In addition, harvested rainwater shall also be utilized to meet its demand.

The wastewater generation from the above consumption will be 17 m<sup>3</sup>/day, in which from Domestic use is 8 m<sup>3</sup>/day & 9m<sup>3</sup>/day from workshop.

There is no trade effluent from the Mines. Only, domestic sewage to the tune of 8 m<sup>3</sup>/day will be generated, which will be biologically treated in septic tank followed by Soak pit. The wastewater generated from the workshop will be used for green belt development after removing oil and grease. The mining will not intersect the ground water table.



## WATER POLLUTION CONTROL MEASURES

- Construction and maintenance of garland drains around mines area with proper gradients to prevent rain water descent into active mine areas.
- During monsoon rain water may accumulate in the working pits. It is proposed to form a sump in the bottom most bench to store the rain water entered into the pit and will be used for dust suppression, greenbelt development and ground water recharge.
- Earthen banks will be provided on non-operating side of dumps to arrest wash-off. Saplings will also be planted along the foot and unused slopes to arrest / prevent erosion

### 4.4 LAND ENVIRONMENT

During the plan period, out of the total ML area of 1228.63, only 41.31 ha will be broken up for mining during the first five years. At the end of life of mine only 241.72 ha will be broken up. A summary of land use during operational period is provided in table below:

**LANDUSE PATTERN DURING OPERATIONAL PHASE**

| S.No. | Heads   | At the end of 5yrs in Ha | At the end of life in Ha                                   |
|-------|---|--------------------------|--|
| 1     | Mining area   | 41.31                    | *241.72<br>Water reservoir – 217.72<br>Backfilling – 24.00 |
| 2     | Soil Dump   | 3.85                     | --   |
| 3     | Area under Road   | 3.91                     | 4.40   |
| 4     | Area under Green belt (i.e. plantation on area other than dump and backfilled area) | 10.00                    | 38.17  |
| 5     | Infrastructure  | 9.60                     | 9.60   |
| 6     | Undisturbed area  | <b>1159.96</b>           | <b>934.74</b>  |
|       | <b>Total</b>  | <b>1228.63</b>           | <b>1228.63</b>   |

\* Not applicable for conceptual period

1.35 million cum of top soil and 7.1 million cum of reject (including top soil) will be utilized for backfilling part of mined out areas. Backfilling will commence from 6<sup>th</sup> Year onwards.

Care will be taken to preserve the natural drainage of the area, it is proposed to leave a safety barrier of 50 m all along the major seasonal drains flowing across the lease area and Doda Halla Nala on the western boundary of the lease area. For a minor seasonal drain originating near the ML boundary, it is proposed to leave a safety barrier of 15 m all along the drain.

#### **4.5 AFFORESTATION AND GREEN BELT DEVELOPMENT**

It is proposed to cover 62.17 ha area (including backfilled area) under afforestation in phased manner within the mining lease.

Dense plantation is proposed to be carried out of 30 m thick zone along the Manami village to form the wind shield. Plantation shall also be carried out along the northerly flowing Dodda Halla nalla towards the western side of the lease area.

#### **4.6 SOCIO ECONOMIC ENVIRONMENT**

Manami village is located within the lease area on the western boundary in non-mining area. No mining activities are proposed in & around the village. Sufficient safety barrier will be left as per the guidelines from the village.

The mining activities do not involve any displacement of human settlement.

Mining activity will generate employment potential to the people of the surrounding villages. Infrastructure like road, school and dispensary would also be coming up which would benefit local people and result in improving the quality of life and their living standard.

Based on the need based assessment study conducted by household questionnaires in the area detailed CSR activities have been planned in the area which will help in overall development of the area.

#### **4.7 OCCUPATIONAL HEALTH AND SAFETY**

The health of the workers will be regularly checked and suitable medical facilities will be created on or close to the site. Highest safety standards will be ensured in the working conditions of the miners.

- Safety shoes, helmets etc. will be issued to each worker. Other safety equipment will be used according to the nature of the job involved.
- Provision of AC cabin for HEMM operators.
- Provision of ergonomically designed seats for drivers/operators and in mines office.
- Provision of illumination facilities at proper places of mines for ease of working during night times.
- Work comfort and its periodic review by a committee.
- Provision of all Personal Protective Equipment's for the employees at Mines.
- Provision of Rest Shelter at mines.
- Provision of chilled drinking water (from RO Plant).

#### **5.0 ANALYSIS OF ALTERNATIVES (TECHNOLOGY & SITE)**

The mine will be operated by means of opencast method conventional system of mining, which includes drilling, blasting, loading and transportation.

No alternate sites are selected as the as the project is site specific. The area has cement grade limestone for manufacturing of cement. This area is notified by the Govt. of Karnataka regarding occurrence of cement grade limestone and allotted for captive limestone mining.

## 6.0 ENVIRONMENTAL MONITORING PROGRAMME

DCBL will ensure the implementation of the measures within the mine area and carryout efficient monitoring.

DCBL will monitor the environmental parameters as per CPCB/KSPCB/IBM/MoEF guidelines. The monitoring will be taken care by Environmental Cell common for the plant and mines.

### ENVIRONMENTAL MANAGEMENT CELL

In order to maintain the environmental quality within the standards, regular monitoring of various environmental components is necessary. A dedicated Environmental cell common for plant and its captive limestone mine will be established.

The capital investment proposed on environmental management is Rs. 30 lakh and the annual cost of monitoring and implementation of control measures for proposed project operation are estimated to be about Rs. 11.20 lakh. The details of capital cost and recurring cost of EMP are given below

#### Capital Cost Estimate for EMP

| Sn | Particulars  | Total Cost (Rs Lacs) |
|----|--|----------------------|
| A  | Pollution Control Provisions in Mines/Miscellaneous Services | 18.3                 |
| B  | Provision for Disaster Management plan & Occupational Health | 3.45                 |
| C  | Environmental Monitoring                                     | 1.5                  |
| D  | Protection Work (Storm Water Drains, culverts etc.)          | 5.5                  |
| E  | Green Belt Development/Afforestation                         | 1.25                 |
|    | <b>Grand Total</b>   | <b>30</b>            |

#### Recurring Cost of Environmental Protection

| Particulars  | (Rs Lacs per annum) |
|--|---------------------|
| Air Quality Control  | 3.00                |
| Water Quality and Management                               | 1.5                 |
| Solid Waste Management                                     | 1.5                 |
| Monitoring   | 1.50                |
| Miscellaneous including DMP                                | 1.70                |
| Afforestation/Green belt development including maintenance | 2.0                 |
| <b>Total</b>   | <b>11.20</b>        |

## 7.0 ADDITIONAL STUDIES

**Risk Assessment and DMP:-** The mine activities, fire, water inundation, electrical shock, natural calamities, etc. are the risks associated with the mining activities. Detailed assessment and mitigative measures are delineated and an effective Disaster Management Plan is also envisaged.

Hydrogeology study and need based assessment are also carried out for the proposed mine.

## 8.0 PROJECT BENEFITS

About 70 persons may be employed for carrying out the mining operations. In addition there will be indirect employment to many more people in the form of contractual jobs, business opportunities, service facilities etc. This will enhance the economic status of the region.

Apart from the jobs, the company will provide medical and educational facilities to the employees which can also be availed by the people around the mine. Adequate recreational facilities for the staff of the company and the local people will be created.

DCBL will take-up various social welfare measures in the vicinity of mine.

DCBL have already started implementing the CSR program in villages adjoining the project site. DCBL has engaged a highly reputed NGO, Dr. Reddy's Foundation (DRF), to implement a 3 pronged program aiming at livelihood creation & enhancement and providing curative health services to the locals. Extensive farmers' training programs and health camps are being organized under the program.

DCBL has already implemented a scheme for receiving safe drinking water for local people of the area.

Founded on the needs assessment study and participatory rural appraisals done in the proposed area, it is proposed to work on the following program in the next 10 years:

| Sr. No.       | Program          | Tentative activities  | Tentative allocation (INR in Lakhs) |
|---------------|------------------|---|-------------------------------------|
| 1             | Livelihood       | Skill Development, Agriculture productivity, increasing employability   | 70                                  |
| 2             | Health           | Preventive and curative health services   | 50                                  |
| 3             | Education        | Improvement in quality education at pre-primary and primary levels  | 30                                  |
| 4             | Infrastructure   | Need based development and maintenance of Infrastructure, provision of safe drinking water and water harvesting | 80                                  |
| 5             | Sports Promotion | Facilitating organization of sports and cultural events   | 20                                  |
| 6             | Miscellaneous    | Based on the need assessed from time to time  | 25                                  |
| <b>TOTAL:</b> |                  |   | <b>275</b>                          |

### CONCLUSION

*DCBL strongly believes in the concept of sustainable mining and would take measures for a positive impact on the surroundings.*