

**PRE FEASIBILITY REPORT
FOR
EXPANSION OF
SHAHABAD (BANKUR) LIMESTONE MINING CAPACITY
FROM 0.864 MTPA TO 6.20 MTPA WITH IN ML AREA OF
328.34 HA
AT BANKUR VILLAGE, CHITAPUR TEHSIL,
GULBARGA DISTRICT, KARNATAKA**



**JAYPEE CEMENT CORPORATION LIMITED (JCCL)
KARNATAKA**

Submitted to

**Ministry of Environment, Forest and Climate Change
New Delhi**

July, 2017

1.0 Executive Summary

Proposed Project	Expansion of Shahabad (Bankur) Limestone mining capacity from 0.864 MTPA to 6.2 MTPA within ML area of 328.34 ha at Bankur village, Chitapur tehsil, Gulbarga district, Karnataka.		
	VIOLATION: Application under the provision of MoEF&CC Gazette Notification S.O.804 (E) dated 14 th March, 2017 due to violation in operation of mine during its revival post award of project ordered by DRT, during the Year 2007-08 without requisite prior Environmental Clearance as per the provision of the EIA Notification, 2006 notified under Environment (Protection) Act, 1986.		
Mine Location	Bankur village, Chitapur Tehsil, Gulbarga District, Karnataka		
Geographical Coordinate	Sr. No	Latitude	Longitude
	A	17 ^o 09'52.5"	76 ^o 58'51.2"
	B	17 ^o 10'36.8"	76 ^o 58'40.3"
	C	17 ^o 11'08.1"	76 ^o 57'54.5"
	D	17 ^o 10'38.06"	76 ^o 57'10.3"
	E	17 ^o 10'23.1"	76 ^o 57'50.2"
Sr. No. in the Schedule	1 (a) – Category as per EIA Notification 2006		
Mine Lease Area	Total – 328.24 Ha		
Water Requirement	In total 80 m ³ /day water will be required for mining operation. Water requirement shall be met from mine pit sump created due to extraction of limestone. Drinking water requirement shall be met from plant water supply.		
Power Requirement	3.8 MW power requirement will be met from KEB (Karnataka Electricity Board) grid and CPP of Cement plant.		
Man Power Requirement	225 nos		
Nearest Rly. Stn, / Airport	Nearest railway station- Shahabad (5.9 km, SSW)		
	Nearest airport- Hyderabad (150 km, E)		
Nearest town/city/DH	Nearest city – Gulbarga (20.0 km, NW)		
Life of mine	25 years		
Cost of the Project	Rs. 15 Crores		

2.0 Introduction of Project

• Identification of project proponent

Jaypee Cement Corporation Ltd.(JCCL) is a public limited company under “ Jaypee Group” which is a well-diversified industrial conglomerate in India. Company participates in nation building through core section activities of Engineering and Construction, Cement, Private Hydropower, Development of Expressways, Highways, Hospitality, Real-estate, Fertilizers, Medicare and University & Management education etc.

• Identification of the project

Jaypee Cement Corporation Ltd. (JCCL), formerly known as Zavar Cement (P) Ltd. had acquired assets of an old Cement Plant at Shahabad, Distt. Gulbarga, Karnataka along with its captive Limestone Mines through an order of Debt Recovery Tribunal (DRT). The subject Captive Limestone Mine is a part of the

Cement Plant, which is amongst the first few Cement Plants set up in the country. The Plant has undergone a number of changes in ownership along with its Captive Limestone Mine. The historical changes have been as under:

- 1) M/s. HMP Limited (HMP) had a proposed mining lease (ML 2092) of Lime Stone Mine (Bankur) for captive use for its Cement Plant at Shahabad. The said mining lease was determined in December, 1997 by Director, Mines & Geology due to default of HMP.
- 2) The mine along with the Shahabad Cement Plant was acquired by M/s. Zawar Cement Pvt. Ltd. (ZCPL), a company promoted by Zawar Group, in November 2006, in auction from Debt Recovery Tribunal (DRT), Kolkata. ZCPL had committed to the Debt Recovery Tribunal, DRT that ZCPL will resume operation of the captive mines and the cement plant at the earliest; so as to provide employment to 850 ex-employees and subsequently replace the obsolete technology process by modern equipment.
- 3) Mining lease pertaining to the Captive Lime Stone Mine existing in the name of HMP was ordered to be restored in the name of ZCPL by DRT. The mining lease ML No. 2092 which lapsed on 30th July 1999 was restored on 18th April 2007 by the Director, Mines & Geology, Karnataka from 1995 to 2015, on the order of DRT.
- 4) In the meantime, Jaypee Group took over the management control of ZCPL by acquiring 100% shares from Zawar Group on 11th August 2010. Subsequently name of the Company was changed from M/s. Zawar Cement Pvt. Ltd. to M/s. Jaypee Cement Corporation Ltd. (JCCL) on 6th December 2010 through a Resolution of EOGM.
- 5) Renewal for mining lease applied for 20 years or more w.e.f. 01.10.2015 as applicable under the existing rules. As per sub-section (3) of section 8A of "The Mines and Minerals (Development & Regulation) Amendment Act, 2015, enacted on 27.03.2015, all the mining leases granted before the introduction of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 shall be deemed to have been granted for a period of fifty years.
- 6) Shahabad (Bankur) Limestone Mine will cater the limestone requirement of proposed integrated cement plant being setup by JCCL within the existing premises. Environmental Clearance was granted by MoEF&CC vide letter ref. No. J-11011/541/2010-IA. II (I) dated 16.12.2011, for setting up a Integrated Cement Plant of 6 MTPA (2 Streams of 3 MTPA each) along with 90 MW Coal based Captive Thermal Power Plant with an investment of Rs. 3000 Crores.

3.0 Purpose of Resubmission

- 1) Jaypee Group took over the management control of ZCPL by acquiring 100% shares from Zawar Group on 11th August 2010. Subsequently name of the Company was changed from M/s. Zawar Cement Pvt. Ltd. to M/s. Jaypee Cement Corporation Ltd. (JCCL) on 6th December 2010 through a Resolution of EOGM.
- 2) ZCPL made an application to MOEF seeking Environmental Clearance for the Bankur Mines on 14th August 2008 and MOEF issued TOR on 28th Nov. 2008. ZCPL conducted EIA studies/held Public Hearing for obtaining Environmental Clearance for the enhanced capacity of Limestone Mine.

- 3) Since Jaypee Group took over ZCPL, JCCL presented the final EIA report for Bankur Limestone Mine in Expert Appraisal Committee (Non Coal-Mining), MoEF meeting held during 25th-26th April, 2011 to obtain Environmental Clearance. The Expert Appraisal Committee (EAC) directed JCCL to conduct fresh baseline studies and submit revised EIA report on issues mentioned below:
- TOR was about four years old and no more valid; and
 - Public Hearing was chaired by Asst. Commissioner who is not a competent authority under EIA Notification 2006. Therefore a fresh Public Hearing was to be arranged.
- 4) Fresh EIA studies were conducted for the captive limestone mine as per the directions of Expert Appraisal Committee/MOEF and a fresh Public Hearing was conducted on 12.09.2012. The presentation for grant of Environmental Clearance to Expert Appraisal Committee was made during the meeting held on 13th-15th March 2013. During Presentation, Expert Appraisal committee observed that the mine was operated during the year 2007-08 without requisite Environmental Clearance and considered it as a violation of the Environmental (Protection) Act 1986. (The company had declared production figures from the subject Mine during the period in question in EIA report)

The Expert Appraisal Committee recommended the project for grant of Environmental Clearance subject to credible action taken by the State Authorities. As per the directions and in line with the procedures laid down by MOEF, JCCL had submitted required documents and Certified Copy of the Resolution passed by the Board of Directors of Jaypee Cement Corporation Ltd. by Circulation on 18th April 2013.

- 5) MoEF vide its letter no.J-11015/387/2008-IA.II(M) dated 8th April, 2013 desired fulfillment of procedure evolved for dealing with cases of violation, held in year 2007-08. JCCL submitted reply vide its letter ref. No. JCCL/(ZCPL)/MOEF/MINE/KARNATKA/2013 dated 12.09.13.
- 6) MoEF advised vide its letter ref. no.J-11015/387/2008-Ia.II(M) dated 23rd September, 2013 to Member Secretary, Karnataka State Pollution Control Board, Bangalore, requesting for appropriate action under section 19 of the Environment (Protection) Act, 1986 for production in the Mines during year 2007-2008, without obtaining Environmental Clearance.
- 7) Member Secretary, State Pollution Control Board requested MoEF to provide the whole documents related to the project for further process vide letter No. PCB/MIN/2013-14/5973 dated 25.01.2014.
- 8) JCCL made request to MoEF for expediting its reply to KSPCB letter dt. 25.01.2014 vide letter no. JCCL/ZCPL/MOEF/MINE/2014 dated 8th October' 2014.
- 9) MoEF vide its letter no.J-11015/387/2008-IA.II(M) dated 26th December, 2014 issued a Show Cause Notice to ZCPL in respect of violation.
- 10) Further, Govt. of Karnataka also issued a Show Cause Notice to ZCPL on the same line vide letter no. FEE 17 EPC 2015 dated 23rd January' 2015.

- 11) JCCL submitted the reply to State Govt. for their Show Cause Notice dated 23rd January' 2015 vide letter no. JCCL/JSCP/MINES/2015 dated 24th January' 2015.
- 12) Govt. of Karnataka forwarded JCCL's reply (after incorporate comments) against their Show Cause Notice to MoEF vide letter no. FEE 17 EPC 2015 dated 24th January' 2015.
- 13) JCCL submitted reply against MoEF's Show cause notice dated 26th December' 2014 with request to grant Environmental Clearance for the Mines vide letter no. JCCL/JSCP/MINES/2015 dated 11th February' 2015.
- 14) Since then, there has not been any advise from MoEF&CC and project is stalled for a very long time.
- 15) As per status of Cases on the Ministry's Website, the case was referred as "DELIST". No reason has been assigned.
- 16) JCCL submitted a letter to MoEF&CC and clarified about desired information & documents submitted earlier and requested for Environmental Clearance vide letter no. JCCL/ZCPL/MOEF/MINE/2015 dated 16th Dec' 2015.
- 17) JCCL submitted letter to the Hon'ble Minister of State (Independent Charge), MoEF&CC and clarified about desired information & documents submitted earlier and requested for Environmental Clearance vide letter no. JCCL/JSCP/MINES/2016 dated 15th March, 2016.
- 18) JCCL submitted letter to Director, MoEF&CC and clarified with desired information & documents submitted earlier and requested for Environmental Clearance vide letter no. JCCL/JSCP/MINES/2016 dated 11th April, 2016.

Now, the present application is submitted under the provision of MoEF&CC Gazette Notification S.O.804 (E) dated 14th March, 2017 due to violation in operation of mine during its revival post award of project ordered by DRT, during the Year 2007-08 without requisite prior Environmental Clearance as per the provision of the EIA Notification, 2006 notified under Environment (Protection) Act, 1986.

4.0 Environmental Setting

The environmental settings of the project site are given in **Table-1**. The index map is shown in **Figure-1**. Topo sheet representing location map of 1:50,000 scale covering land use/ land cover, reserve forests, wildlife sanctuaries, national parks, tiger reserves etc (if any) within 10 km of the project site is shown in **Figure-2**.

TABLE-1**DETAILS OF ENVIRONMENTAL SETTING (10 KM RADIUS)**

Sr. No.	Particulars	Details		
1	Location			
a	Village	Bankur		
b	Tehsil	Chitapur		
c	District	Gulbarga		
d	State	Karnataka		
e	Geographical co-ordinates	Sr. No	Latitude	Longitude
		A	17°09'52.5"	76°58'51.2"
		B	17°10'36.8"	76°58'40.3"
		C	17°11'08.1"	76°57'54.5"
		D	17°10'38.06"	76°57'10.3"
		E	17°10'23.1"	76°57'50.2"
2	Elevation (MSL)	Undulating 420 M – 395 M mRL		
3	Land use at the project site	Industrial Use (Area is under possession of JCCL)		
4	Climatic conditions	As per IMD, Gulbarga (Annual) Minimum Temp : 15.1 °C Maximum Temp : 40.2 °C Average rainfall : 753 mm		
5	Nearest highway	SH-10 10.8 km, NE		
6	Nearest railhead / Railway station	Shahabad 5.9 km, SSW		
7	Nearest airport	Hyderabad 150 km, E		
8	Defence installations	Nil		
9	Archaeological important places	Nil		
10	Ecological Sensitive Areas (National Parks, Wildlife sanctuaries)	Nil		
11	Reserved/Protected forests within 10 km radius	Nil		
12	Industries in 10 km radius	JCCL 3.2 km, SW Alstom 3.2 km, SW ACC Wadi 11.4 km, S		
13	Nearest major city	Gulbraga-20.0 Km, NW		
14	Nearest major settlement	Shahabad-5.9 Km, SSW		
15	Nearest river	Kagna/Kagina river 0.4 km, SE Nandana halla 2.9 km, W Bhima river 14.6 km, S		
16	R & R issues	Entire land is in possession of JCCL		
17	Seismic zone	Zone-II as per IS-1893 (Part-I): 2002		

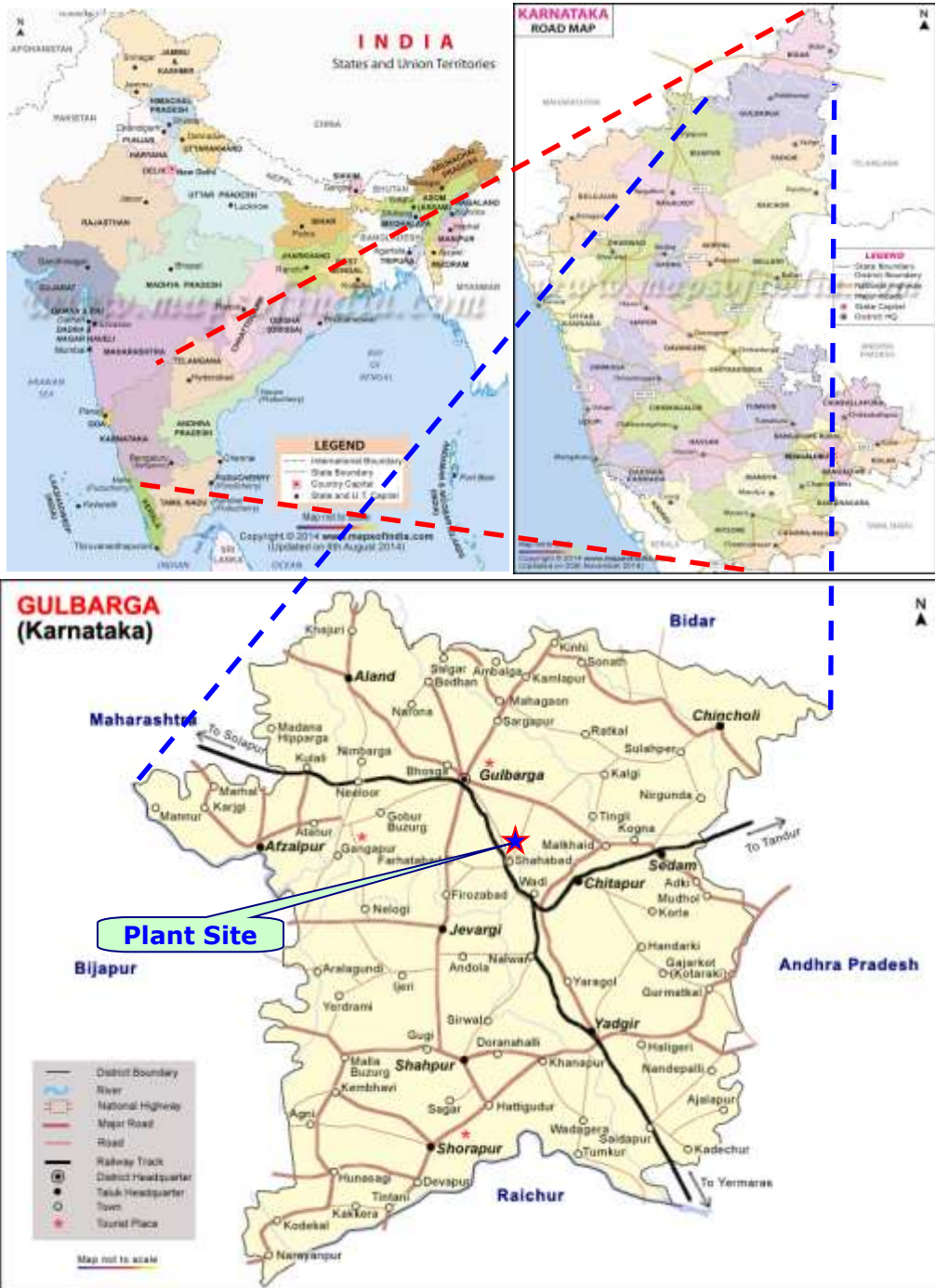
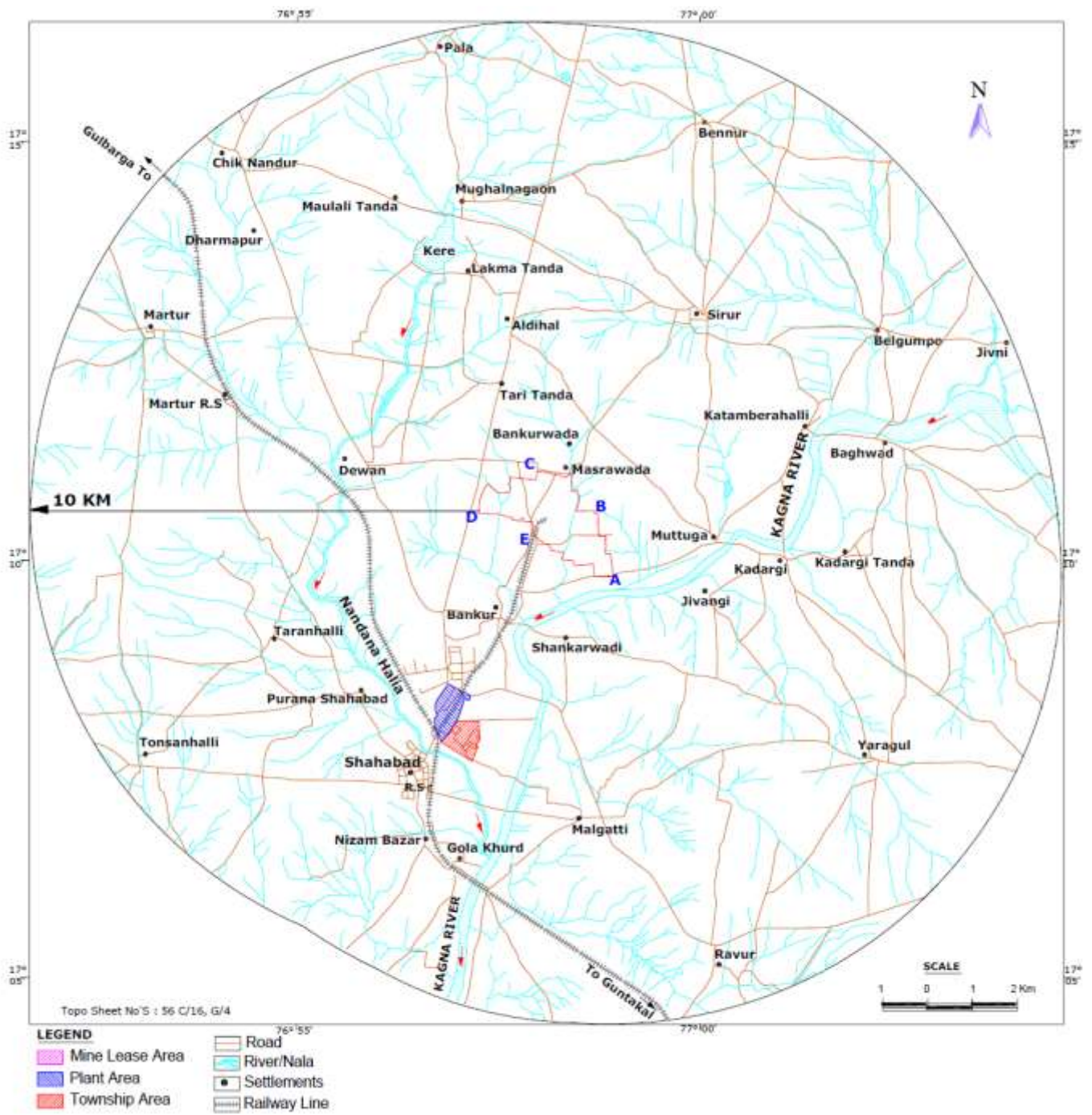


FIGURE 1
INDEX MAP



Sr. No	Latitude	Longitude
A	17°09'52.5"	76°58'51.2"
B	17°10'36.8"	76°58'40.3"
C	17°11'08.1"	76°57'54.5"
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FIGURE-2
STUDY AREA MAP

5.0 Salient Features of Limestone Mine

The salient features of the mine lease area are presented in **Table-2**

TABLE-2
SALIENT FEATURES OF LIMESTONE MINE

Sr. No.	Description	Details
1	Name of the mine lease	Shahabad Bankur Lime Stone Mine
2	Extent of mine lease (ML) area	328.34 ha
3	Elevation MSL	Undulating 420 M – 395 M mRL
4	Type of ML area	Non-forest land
5	Rated capacity of mine	6.20 MTPA limestone production
6	Expected life of mine	25 years
7	Method of mining	Open cast mechanized mining by shovel dumper combination
8	Total reserves	1200.37 lakh tonnes
9	Mineable reserves	373.43 lakh tonnes
10	OB generation (for plan period) in the form of Top Soil	107058 tonnes
11	Over burden thickness	0.5-1.0 m
12	Ultimate bottom level	384 mRL
13	Safety zone	7.5 m around ML boundary
14	Working hours	3 shift per day of 7 hrs in 300 days of operation in a year
15	Maximum bench height	9m
16	Working bench angle	60°
17	Overall final pit slope	45°
18	Temporary top soil dump	4.25 ha with in ML area
19	Water requirement	80 m ³ /day
20	Power requirement	3.8 MW
21	Source of power	KSEB & CPP of Cement Plant
22	Manpower requirement	225 nos.
23	Transport of OB (Top Soil) & LS	Dumpers of capacity 40 T/ 60T

Source: Mine Plan

6.0 Method of Mining

The choice of mining method has been considered as opencast mining for quarrying the limestone from the mines. The mining operation will be fully mechanized. The sequence of operation is quarrying, drilling, blasting, loading and transportation.

All the rock types occurring within the area are fully exposed. There is only top soil that occurs on the surface and hence removal of the top soil by bull dozers would be required. 40T/60T capacity dumper will be used to transport the OB (Top Soil) from the face to dump area and limestone from working face to crusher, located in mine lease area.

For limestone, 115 mm size drills will be used for drilling. Crawler mounted hydraulic excavator with bucket capacity of 3.5 m³ and 4.0 m³ capacity will be used for loading and transportation to cement plant by covered tube belt conveyor system will be used from the mine lease area.

Limestone Reserve Estimation

Chemical analysis of limestone shows the range values of CaCO₃ content from 81.7 to 85.3%, MgCO₃ from 1.3 to 1.5% and total carbon from 83 to 87%. The **Table-3** shows block wise available reserves within the mine area.

TABLE-3
RESERVES OF LIMESTONE

Block	Measured	Indicated	Total	Quantity in lakh tonnes		
				CaCO ₃	MgCO ₃	TC
W1	51.43	0	51.43	85.30	01.50	87.00
W2	98.70	0	98.70	83.70	01.30	85.60
W3		38.64	38.64			
W4		06.69	06.69			
W5		06.71	06.71			
E1	60.86	0	60.86	81.70	01.30	83.00
E2		118.87	118.87			
E3		04.45	04.45			
Total	210.99	175.36	386.35			

Note: W1, W2, W3, W4, W5 are Western Blocks; E1, E2, E3 are Eastern Blocks Source: Mine plan

Mineral Reserves

The mineral reserves have been estimated for the limestone horizon only. The black cotton soil occurring above limestone is treated as overburden. The weighted average quality of limestone horizon found up to mineable depth is suitable for cement making. The summary of reserves is given in **Table-4**.

TABLE-4
SUMMARY OF RESERVES

	Quantity
	Quantity in lakh tonnes
Gray 85 % CaCO ₃ (Minable)	373.43
Purple 83% CaCO ₃	402.25
Siliceous81% CaCO ₃	424.69
Total	1200.37

Source: Mine plan

Yearly wise Lime Stone Production

The deposit is being worked in two blocks. During the next five years, it is proposed to carry out the mining operations to produce about 87,73,040 tonnes of limestone. The maximum production of limestone comes during the end of the fifth year (61,77,315 tonnes) whereas the minimum production is expected during the first year (4,91,260 tonnes). Mining will continue in both blocks over the five year period and further extended from 6th year onwards. Details on yearly section wise production of limestone is given in **Table-5**.

TABLE-5
YEARLY SECTION WISE PRODUCTION OF LIMESTONE

Year	Western	Eastern	Total	Quantity in tonnes
				O/B Soil
1 st	2,46,800	2,44,460	4,91,260	18,562
2 nd	3,50,175	3,51,895	7,02,070	17,860
3 rd	3,51,345	3,50,370	7,01,715	17,698
4 th	3,51,045	3,49,635	7,00,680	14,346
5 th	38,28,070	23,49,245	61,77,315	38,592
Total	51,27,435	36,45,605	87,73,040	1,07,058

Source: Mine plan

Land Reclamation

Reclamation and rehabilitation work will be taken up along with mining. Plantation scheme will be taken up systematically with soil binding grasses and shrubs and

followed by trees plantation at magazine section, below the mines road (slopes), along the mines road, mines office premises, crusher and adjoining areas.

7.0 Site Analysis

Connectivity

The project site is well connected with SH-10 which is around 10.8 km towards NE and Shahabad railway station is about 5.9 km towards, SSW.

8.0 PLANNING BRIEF

8.1 Planning Concept Town and Country Planning/Development Authority Classification

It is an open cast mine project hence mining of mineral Limestone shall be carried out. The production of Limestone is proposed at 6.20 MTPA. Open cast methods of mining will be adopted and transportation of mineral shall be done through tube conveyer belt from mine to plant. Owing to implementation of the mining project in the area, there is a positive impact in socio cultural aspects.

8.2 Population Projection

The mining establishment presents vast opportunities of employment to various positions under various cadres, viz., Management, supervisory, skilled workmen, semi-skilled workmen and unskilled workmen besides casual workmen. There will be 225 persons will be deployed for the proposed ML operation.

8.3 Land Use Pattern in Mine Lease Area

The land use pattern of mine lease is given in **Table-6**.

TABLE-6
LAND USE PATTERN OF MINE LEASE

Sr.No.	Purpose of use (ha)	Area in (ha) as on Today	Area in (ha) at the end of 5 Years Plan Period
1	Mine workings	13.35	0.0
2	Area to be excavated	0.0	37.10
3	Storage of top soil	1.0	1.0
4	Over burden/ Dump (Reject Dump)	3.25	4.25
5	Mineral storage	0.0	0.0
6	Infrastructure (Workshop / Buildings etc)	2.0	2.0
7	Roads	2.50	5.0
8	Belt Conveyor	1.10	1.10
9	Green belt	0.0	20.0
10	Others (Retention wall, Check-dams etc)	0.0	1.0
11	Area remaining untouched	305.14	256.89
	Total	328.34	328.34

Source: Mine plan

8.4 Amenities/Facilities

During mine development phase of the project, work force needs to be deployed, which consists of skilled and un-skilled workers. All the workers will be housed in labour colony, which will be located near the project site. The colony which will be temporary in nature will have the following amenities:

- Drinking water facility – Drinking water will be supplied through water tankers/community taps;
- Community kitchen will be provided for the workers;
- Sanitation facilities will be constructed which will include the adequate number of separate toilets for men and women. The make shift treatment plant will be installed and treated wastewater will be utilized in greenbelt development;
- During operation, additional manpower shall be accommodate in exiting township of cement plant.
- There has been an increase in the overall basic facilities such as roads, school, health center etc. A better quality of life for the locals has been created and which is further expected to improve over a period of time. The mining operations will provide many direct/indirect job opportunities to skilled & unskilled workers. Owing to implementation of the mining project in the area there will be positive impact in socio-economic aspects.

8.5 Infrastructure

The road facility is already available which shall be used and maintained. Infrastructure facilities like road transport, Post & Telegraph, Telephone, Banks etc. are basics for each and every area. With the start of mining operations, various employment opportunities will be generated. Several persons will be benefited with contract works, employment through contractor, running of jeep and buses, canteens, different kind of shops and transport related business avenues.

9.0 Resources

• Land Requirement

The mine along with the Shahabad Cement Plant was acquired by M/s. Zawar Cement Pvt. Ltd. (ZCPL), a company promoted by Zawar Group, in November 2006, in auction from Debt Recovery Tribunal (DRT), Kolkata. Jaypee Group took over the management control of ZCPL by acquiring 100% shares from Zawar Group on 11th August 2010. Subsequently name of the Company was changed from M/s. Zawar Cement Pvt. Ltd. to M/s. Jaypee Cement Corporation Ltd. (JCCL) on 6th December 2010 through a Resolution of EOGM. Total Mine lease area is 328.34 Ha.

• Water Requirement

80 m³/day will be required for operation of mines which will be met fully from the rainwater accumulated in the mine sump except for potable water.

• Manpower

During operation phase, manpower requirement will be about 225 nos. including skilled and unskilled workers.

10.0 Greenbelt Development

The main aim of plantation in and around the mine areas is to stabilize the land to protect it from rain and wind erosion. As the leftover working area shall contain broken material and fine particles, stabilization against wind erosion is also a must. The plantation scheme broadly covers the following areas:

- * Plantation around peripheral portions of mine and other built up structures;
- * Afforestation of barren areas and haul road plantation in the lease hold;
- * Plantation by way of reclamation /rehabilitation of mined out blocks and waste dumps; and

* Improving the conditions of catchment areas and to prevent erosion.

The plantation schedule is given in **Table-7**.

TABLE-7
PLANTATION SCHEDULE

Sr. No	Year	Location	No. of saplings	Species
1	1 st year	Along the boundary, roads, earmarked etc	2500	Acacia, Casuarina, cashew, subhabul, mango, bio fuel plants etc
2	2 nd year	-do-	2500	-do-
3	3 rd year	-do-	2500	-do-
4	4 th year	-do-	2500	-do-
5	5 th year	-do-	2500	-do-

All protection measures like provision of garland drain, afforestation and stabilization will be taken care on year to year basis as per the requirement. A final mine closure plan incorporating time schedule for abandonment shall be submitted before one year of its closure as per rule.

11.0 Rehabilitation and Resettlement (R & R) Plan

The mine area does not cover any habitation. Hence the mining activities does not involve any displacement of human settlement. No public buildings, places, monuments exist in the lease area or in the vicinity. The mining operations do not disturb / relocate any village or need any resettlement.

12.0 Project Schedule & Cost Estimates

It is a mining project, which is likely to be commenced after obtaining environmental clearance from MoEF followed by consent to establish and consent to operate from State Pollution Control Board (SPCB). Production planning will be an average production of 6.20 MPTA for Limestone. The estimated project cost is around Rs.15 crores.

13.0 Analysis of Proposal

Financial Benefit

This will also generate revenue to the state government as well as central government in the form of taxes and duties. The people around the region will get direct and indirect employment thus improves the financial status

Social Benefits

The proposed project shall proactively participate in the upliftment of socio economic index of the communities around the project site by way of financial and administrative support. The project will open up employment opportunities, directly and also indirectly. There shall be opportunities for entrepreneurs to engage in many service sectors directly or indirectly associated with the project.

The CSR approach of the company shall be towards sustainable livelihood management of the community around. There shall be focus on education, health, sanitation, drinking water, agriculture, water shed management, culture identity preservation, tribal welfare, welfare of socially weaker sections and marginalized people.