

NBH/PC-14/C13/2025-26/0245

Through Email

Date: 22/05/2026

To,

**The Member Secretary**

SEIAA, Aravalli Bhawan,

Jhalana Institutional area,

Jaipur, Rajasthan - 302004

**Sub:** Environmental Clearance Compliance report of Karunda Limestone Mine (ML 03/2003, Area 240.86 Ha) from 2.0 MTPA Limestone to total excavation of 3.8 MTPA (Cement grade Lime stone-3.448 MTPA, Subgrade Limestone- 0.152 MTPA, Interstitial clay/Screen rejects/Waste- 0.189 MTPA and Top soil-0.011 MTPA) and Limestone Crusher with screening (500 TPH Crusher and 50 TPH Screening Clay) situated at Village - Karunda, Tehsil - Nimbahera, District - Chittorgarh, Rajasthan by M/s J.K. Cement Limited – ( J. K. Cement Works, Nimbahera) for the period of **October 2025 to March 2026**.

Ref.: EC letter no. - J-11015 / 36/ 2019-IA. II (M) dated 19<sup>th</sup> August 2021

Dear Sir,

Kindly refer to the above subject matter and refer EC letter no., please find attached herewith compliance of EC for the period of **October 2025 to March 2026**.

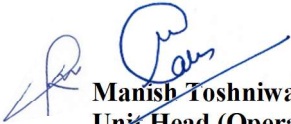
As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the soft copy of same has been sent through email to [iro.jaipur-mefcc@gov.in](mailto:iro.jaipur-mefcc@gov.in), [moef@nic.in](mailto:moef@nic.in), [ccb.cpcb@nic.in](mailto:ccb.cpcb@nic.in), [member-secretary@rpcb.nic.in](mailto:member-secretary@rpcb.nic.in), [cpcb.bhopal@gov.in](mailto:cpcb.bhopal@gov.in), [monitoring-ec@nic.in](mailto:monitoring-ec@nic.in), [ro.chittorgarh@gmail.com](mailto:ro.chittorgarh@gmail.com).

We hope that the compliance is in order.

Thanking you.

Yours Faithfully

For J. K. Cement Works, Nimbahera



**Manish Toshniwal**  
Unit Head (Operations)

Encl: as above

**Copy to:**

1. The Director (M), Ministry of Environment, Forest & Climate Change, Indra Paryavaran Bhawan, JOR Bagh Road, Aliganj, **New Delhi - 110003**
2. The Deputy Director(S), Ministry of Environment, Forests & Climate Change, Integrated Regional office, Jaipur, A-218, Aranya Bhawan, Jhalana Institutional Area, **Jaipur-302004**
3. The Regional Director Central Pollution Control Board, Paryavaran Parisar, E-5, Arera colony, **Bhopal (M.P) 462016**
4. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, **New Delhi 110032**.
5. The Chairman, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, **Jaipur - 302004 (Rajasthan)**

## Corporate Office

- 📍 Prism Tower, 6th Floor, Ninaniya Estate, Gwal Pahari, Gurugram - 122102, Haryana
- ☎ 0124-6919000
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Jharli (Haryana) | Katni (M.P.) | Aligarh (U.P.) | Balasinor (Gujarat)

**Half Yearly Compliance Report****2026****01 Jun(01 Oct - 31 Mar)****Acknowledgement**

<b>Proposal Name</b>	Environmental Clearance for Expansion of Karunda Limestone Mine (M.L. No.: 03/2003, ML Area 240.86 ha.) from 2.0 Million TPA Limestone to total excavation of 3.8 Million TPA (Cement Grade Limestone: 3.448 Million TPA, Subgrade Limestone: 0.152 Million TPA, Interstitial Clay/ Screen rejects/ Waste: 0.189 Million TPA and Top Soil: 0.011 Million TPA) and Limestone Crusher with Screening (500 TPH Limestone and 50 TPH Screening Clay) situated at Village - Karunda, Tehsil - Nimbahera, District - Chittorgarh, Rajasthan by M/s. J.K. Cement Limited.		
<b>Name of Entity / Corporate Office</b>	Environmental Clearance for Expansion of Karunda Limestone Mine (M.L. No.: 03/2003, ML Area 240.86 ha.) from 2.0 Million TPA Limestone to total excavation of 3.8 Million TPA		
<b>Village(s)</b>	N/A		
<b>District</b>	CHITTORGARH		
<b>Proposal No.</b>	IA/RJ/MIN/ 210770/2019	<b>Category</b>	Non-Coal Mining
<b>Plot / Survey / Khasra No.</b>	N/A	<b>Sub-District</b>	N/A
<b>State</b>	RAJASTHAN	<b>Entity's PAN</b>	*****0355R
<b>MoEF File No.</b>	J-11015/36/2019-IA.II (M)	<b>Entity name as per PAN</b>	J K CEMENT LIMITED

**Compliance Reporting Details**

<b>Reporting Year</b>	2026
<b>Remarks (if any)</b>	Submitting the Six-Monthly Environmental Clearance for Expansion of Karunda Limestone Mine (M.L. No.: 03/2003, ML Area 240.86 ha.) from 2.0 Million TPA Limestone to total excavation of 3.8 Million TPA (Cement Grade Limestone: 3.448 Million TPA, Subgrade Limestone: 0.152 Million TPA, Interstitial Clay/ Screen rejects/ Waste: 0.189 Million TPA and Top Soil: 0.011 Million TPA) and Limestone Crusher with Screening (500 TPH Limestone and 50 TPH Screening Clay) situated at Village -

Karunda, Tehsil -  
Nimbahera, District -  
Chittorgarh, Rajasthan by  
M/s. J.K. Cement Limited.  
For the period of October  
2025 to March 2026

**Reporting Period** 01 Jun(01 Oct - 31 Mar)

### Details of Production and Project Area

**Name of Entity / Corporate Office** Environmental Clearance for Expansion of Karunda Limestone Mine (M.L. No.: 03/2003, ML Area 240.86 ha.) from 2.0 Million TPA Limestone to total excavation of 3.8 Million TPA

	Project Area as per EC Granted	Actual Project Area in Possession
Private	240.86	240.86
Revenue Land	0	0
Forest	0	0
Others	N/A	N/A
Total	240.86	240.86

### Others Area

Sr. no	Other Name	Area Granted	Area Actual
1	NA	NA	NA

### Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Interstitial Clay/Screen rejects/Waste	Million Tons per Annum (MTPA)	31/10/2026	0.189	0.139946	0.189
2	Top Soil	Million Tons per Annum (MTPA)	31/10/2026	0.011	0.00716	0.011
3	Cement Grade Limestone	Million Tons per Annum (MTPA)	31/10/2026	3.448	2.71835274	3.448
4	Subgrade Limestone	Million Tons per Annum (MTPA)	31/10/2026	0.152	0.04454	0.152

### Conditions

#### Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The project proponent should explore the possibility of plantation in the adjoining area outside the lease boundary between the village and the mine lease to create a barrier of at least 50 m width belt.
<b>PPs Submission:</b> Being Complied Plantation is being done as per approved mining plan. Plantation is being carried out at within the lease boundary and outside the lease boundary area. We are exploring all possibility of plantation between the village and the mine lease.		Date: 28/05/2026
2	Statutory compliance	It is proposed to create a water reservoir at 175.086 ha. at the end of closure of mine. PP must submit a detailed plan that how will this water reservoir be protected, utilized for villagers in agriculture after necessary treatment.
<b>PPs Submission:</b> Agreed to Comply Water reservoir to be developed on 175.086 ha. and detailed plan will be submitted at the time of closure of mine.		Date: 28/05/2026
3	MISCELLANEOUS	The project proponent should explore the possibility of use of permanent water sprinklers for control of dust on the haul roads within the mine lease area.
<b>PPs Submission:</b> Being Complied Unit has deployed one mobile water tanker of 15 KL capacity for regular water sprinkling on the haul roads to prevent dust generation during transportation of limestone through dumpers. Water tankers have also been equipped with high pressure jet systems to wet the blasted muck for suppression the fugitive dust emission during loading activity.		Date: 28/05/2026
4	Statutory compliance	There are village roads passing through the mine lease area. 50 m safety zone on either side and avenue plantation must be undertaken as there was no proposal for road diversion. The safety zone from nearby village currently maintained at 300 m till the life of mine must be maintained at SE and SW directions.
<b>PPs Submission:</b> Complied The diversion of road has completed by Govt. of Rajasthan. Safety zone of 300 m has been maintained towards - Charliya, Karunda and Pipliya Villages and it will be maintained till conceptual stage. If any changes are required, prior permission will be obtained.		Date: 28/05/2026
5	MINING PLAN	OLBC must be completed within 5 months as committed during the presentation.
<b>PPs Submission:</b> Complied OLBC has been commissioned on 12/01/2022, which has been intimated to Ministry.		Date: 28/05/2026
6	GREENBELT	PP should ensure plantation in the mined out pits in the benches, which are not sub-merged in water with 95 % survival rate.
<b>PPs Submission:</b> Complied Presently, mine pits are in active condition, plantation will be done in the benches of mined out pits.		Date: 28/05/2026
7	MINING PLAN	PP must not exceed the total excavation that it has considered for preparation of EMP at any time during the operation.
<b>PPs Submission:</b> Complied Excavation quantity is maintaining well within the permitted limit. Details of excavation MTPA in FY: 2025-26 (October -2025 to March - 2026) as below: Cement Grade Limestone Sub Grade		Date: 28/05/2026

Limestone IB/Screen Reject/ Waste Top Soil 1.36680219 0.0302 0.043646 0.00426		
8	MINING PLAN	Timeline for crusher and belt conveyer installation from Karunda to Maliakhera for internal transport be submitted.
PPs Submission: Agreed to Comply Noted		Date: 28/05/2026
9	GREENBELT	The PP must submit the status report of plantation in the periphery, non-mineral zone, safety zone, avenue plantation, and either side of village road to the Ministry in every 6 months.
PPs Submission: Being Complied Plantation details are given as under: Cumulatively, from the start of the mine till date, a total of 82251 saplings have been planted within the lease area and 4,850 saplings outside the lease area. During the financial year 2024-25, 3,800 saplings have been planted within the lease area, with no plantation carried out outside the lease area. A total of 32.41 hectares within the lease area and 1.50 hectares outside the lease area have been covered under plantation cumulatively. Total plantation done in FY 2025-26 is 3590 Nos. have been planted within the lease area.		Date: 28/05/2026
10	MISCELLANEOUS	Submit the update on implementation of Wildlife Conservation Plan both specific to this mine expenditure as well as combined expenditure annually.
PPs Submission: Being Complied A Combined Wildlife Conservation Plan (WLCP) has been prepared for 5 Nos. of captive Limestone Mines and 2 Nos. of Integrated Cement Plant of J K Cement Ltd located within 10 Km radius in Tehsil Nimbahera, Chittorgarh District. The Wildlife Conservation Plan has been forwarded by the DFO - Chittorgarh to Divisional Chief Conservator of Forest vide letter No.: F(5) Survey/UVS/2021-22/4089 dated 13.07.2021 with a total implementation cost of INR 285.30 lakhs for 10 years. The approved plan is being implemented by the State Forest Department. An amount of INR 57.07 Lakh has already been deposited to the Rajasthan Forest Department as per demand note issued by the DFO - Chittorgarh in July-2021.		Date: 28/05/2026
11	MISCELLANEOUS	At the time of revision of mining plan, EMP if modified, for a peak production be submitted along with the revised mining plan to the Ministry.
PPs Submission: Being Complied Agreed and noted		Date: 28/05/2026
12	GREENBELT	The study carried out by drone and shown during the presentation must be submitted to the Ministry for the purpose of record.
PPs Submission: Complied Drone survey regarding Plantation has been completed and report submitted to the MoEF and CC along with EC Compliance Report on 30/11/2021.		Date: 28/05/2026
13	Statutory compliance	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
PPs Submission: Complied Noted		Date: 28/05/2026
14	Statutory compliance	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in

		Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
<b>PPs Submission:</b> Complied Unit is complying with all the statutory requirements.		Date: 28/05/2026
15	Statutory compliance	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
<b>PPs Submission:</b> Complied Certificate issued by Mining Department regarding the No Dues of compensation levied.		Date: 28/05/2026
16	Statutory compliance	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
<b>PPs Submission:</b> Complied Not applicable		Date: 28/05/2026
17	Statutory compliance	This environmental clearance shall become operational only after receiving formal forest clearance (FC) under the provision of forest conservation act, 1980, if applicable to the project.
<b>PPs Submission:</b> Complied Not applicable		Date: 28/05/2026
18	Statutory compliance	Project proponent (PP) shall obtain consent to operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining consent to establish/consent to operate from the concerned state pollution control board /committee.
<b>PPs Submission:</b> Being Complied Unit obtained the CTE and CTO from RSPCB: - CTE granted by RSPCB vide letter No.: F (Mines)/Chittorgarh (Nimbahera)/1869 (1) /2017-2018/3482-3486, dated 26.10.2021. CTO granted by RSPCB vide letter No.: F (Mines)/Chittorgarh (Nimbahera)/1869(1) /2017-2018/3891-3895, dated 12.11.2021, valid up to 31/10/2026.		Date: 28/05/2026
19	Statutory compliance	The PP shall adhere to the provision of the Mines Act, 1952, Mines and mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian bureau of mines from time to time.
<b>PPs Submission:</b> Complied The PP shall adhere to the provision of the Mines Act, 1952, Mines and mineral (Development and Regulation), Act, 2015 and rules and regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian bureau of mines from time to time.		Date: 28/05/2026
20	Statutory compliance	The project proponent shall obtain consents from all the concerned

		land owners, before start of mining operations as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
<b>PPs Submission:</b> Complied Agreed, landowners have no any concern.		Date: 28/05/2026
21	Statutory compliance	The project proponent shall follow the mitigation measures provided in MOEFCC's office memorandum No. Z-1103/57/2014-IA.II(M), dated 29th October, 2014, titled "Impact of mining activities on Habitations - issues related to the mining projects wherein habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area"
<b>PPs Submission:</b> Complied Unit has taken the following measures to reduces the impact of mining activities on habitations: - 1. Garland drain constructed, 2. Siltation pond facilitated, 3. Regular water spray on haul road is being done, 4. Mask light is being kept in off mode during night period, 5. Company owns road used for limestone transportation, 6. Control blasting has been implemented, and 7. Carried out dense plantation.		Date: 28/05/2026
22	Statutory compliance	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water from CGWA for withdrawal of ground water for the project.
<b>PPs Submission:</b> Being Complied Unit has obtained Combined NOC for ground water withdrawal for Plant and Mines from CGWA vide letter No.: CGWA/NOC/MIN/REN/1/2025/10525		Date: 28/05/2026
23	Statutory compliance	TA copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
<b>PPs Submission:</b> Complied EC copy had been submitted to concern Panchayat, Zila Parishad, DIC Office, District Collector, SDM Office vide letter No.: NBH/ PC-A/EC-M/KRD/13, dated 23.08.2021. Receipt copy of the same has also been submitted to ministry along with last EC half yearly compliance report.		Date: 28/05/2026
24	Statutory compliance	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
<b>PPs Submission:</b> Complied Complied.		Date: 28/05/2026
25	Statutory compliance	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
<b>PPs Submission:</b> Complied EC granted information published in two local newspapers i.e.: Dainik Bhasker and Rajasthan Patrika on 24/08/2021 and proof of the same has been submitted along with last six-monthly EC		Date: 28/05/2026

compliance report.		
26	Statutory compliance	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.
<b>PPs Submission:</b> Agreed to Comply If any change in ownership of mining, will be intimated to the ministry.		Date: 28/05/2026
27	Statutory compliance	The compliance to public hearing as indicated in the table with an investment of 160 Lakhs be submitted annually to the Ministry.
<b>PPs Submission:</b> Being Complied Various community-focused activities addressing public concerns have already been completed. Regular maintenance of these assets is being conducted, and record is being maintained.		Date: 28/05/2026
<b>General Conditions</b>		
Sr.No.	Condition Type	Condition Details
1	WATER QUALITY MONITORING AND PRESERVATION	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.
<b>PPs Submission:</b> Being Complied To augment the water resources, rainwater harvesting is done and stored in lower most benches (Water reservoir). Surface rainwater is collected in the lower most benches to augment Ground water resources. Anicut and siltation pond is constructed to augment water table. Photographs of implemented rainwater harvesting measures are as below:		Date: 28/05/2026
2	AIR QUALITY MONITORING AND PRESERVATION	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No.: B-29016/20/ 90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the Main Gate of the mine site.
<b>PPs Submission:</b> Complied Three (03) nos. of CAAQMS have been installed all along the mine lease boundary: - 1. Near View Point towards Villages Charliya and Peepliya. 2. Near North Pit towards Village Karunda. 3. Towards Village Charliya (Common for Karunda Limestone Mine and Maliakhera Limestone Mine). Digital display board has been provided at Mine Office near Main Gate. CAAQMS data has been uploaded on CPCB and RSPCB portals.		Date: 28/05/2026
3	AIR QUALITY	Effective safeguard measures for prevention of dust generation and

	MONITORING AND PRESERVATION	subsequent suppression (like regular water sprinkling, metaled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment's/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC /Central Pollution Control Board.
<p><b>PPs Submission:</b> Being Complied</p> <p>Following safeguard measures taken for prevention of dust generation: - Regular water sprinkling is being done on haul roads and a water sprinkling system has been provided at the unloading point to control the fugitive emission. Ambient air quality monitoring is being carried out on a regular basis by NABL accredited laboratory. Detail ambient air quality and fugitive emission monitoring reports for the period: October -2025 to March - 2026 is enclosed as Annexure-1 and Annexure-2, respectively.</p>		Date: 28/05/2026
4	WATER QUALITY MONITORING AND PRESERVATION	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
<p><b>PPs Submission:</b> Complied</p> <p>Unit has obtained the NOC for Mines Seepage permission from CGWA/NOC/MIN/REN/1/2025/10525</p>		Date: 28/05/2026
5	WATER QUALITY MONITORING AND PRESERVATION	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
<p><b>PPs Submission:</b> Complied</p> <p>Unit has taken following measures: - No natural water course and / or water resources will be obstructed due to any mining operation. In Karunda Mining lease area, there exists a nallah in the South side flowing in South direction from SW to SE direction meeting the catchment area of the earthen dam. This nallah is only a seasonal nallah and is not a perennial one. This area is already deducted from the active mine working and also, we have put embankment all along the length of the nallah keeping a safety distance of 15 m from it in addition to safety zone of 45 m on both side all along the nallah. Ground water level and quality report submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.</p>		Date: 28/05/2026
6	WATER QUALITY MONITORING AND PRESERVATION	Project Proponent shall regularly monitor and maintain records w.r.t. groundwater level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter

		installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.
<p><b>PPs Submission:</b> Complied</p> <p>Regular monitoring of ground water level and quality is being carried out in and around the mining lease area as per the Environment Management Plan of approved Mining plan by establishing a network of existing wells. Unit has installed 5 nos. of piezometers for periodic and installed one DWLR (Digital Water Level Recorder) with telemetry system for online monitoring of ground water level. Detail ground water level monitoring report for the period: October -2025 to March - 2026 is enclosed as Annexure-3.</p>		<p>Date: 28/05/2026</p>
7	<p><b>WATER QUALITY MONITORING AND PRESERVATION</b></p>	<p>The Project Proponent shall undertake regular monitoring of natural water course/water resources /springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&amp;CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz.: Pre- monsoon (April-May), Monsoon (August), Post-monsoon (November) and Winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.</p>
<p><b>PPs Submission:</b> Complied</p> <p>The unit is monitoring the ground water quality on a quarterly basis i.e.: Pre-monsoon (April-May), Monsoon (August), Post-monsoon (November) and Winter (January) by deploying NABL accredited Laboratory. Ground water quality analysis report for Pre-Monsoon and Monsoon are enclosed as Annexure-4.</p>		<p>Date: 28/05/2026</p>
8	<p><b>WATER QUALITY MONITORING AND PRESERVATION</b></p>	<p>Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA. II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.</p>
<p><b>PPs Submission:</b> Complied</p> <p>There is no wastewater generation from the Limestone mining operation. Mine Key parameter data has been uploaded at <a href="http://www.jkcement.com/environmental-compliance">www.jkcement.com/environmental-compliance</a> as per notification as well as displayed at mine office.</p>		<p>Date: 28/05/2026</p>

9	WATER QUALITY MONITORING AND PRESERVATION	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
<b>PPs Submission:</b> Complied No industrial wastewater is generated from the mining operations. A common workshop is used for both Karunda and Maliakhera Mines, which is located within the Maliakhera Mine premises. The analysis reports of the treated wastewater from this workshop are submitted along with the Maliakhera EC Six-Monthly Compliance Report.		Date: 28/05/2026
10	WATER QUALITY MONITORING AND PRESERVATION	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.
<b>PPs Submission:</b> Complied Water audit report submitted on 25/05/2022.		Date: 28/05/2026
11	Noise Monitoring & Prevention	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
<b>PPs Submission:</b> Complied The blasting operation is being carried out in day time only. Blasting is being done as per DGMS guidelines. Max Peak particle velocity at 500 m distance was observed is 2.285 mm/sec for the period from October -2025 to March - 2026 and report of the same is enclosed as Annexure-5.		Date: 28/05/2026
12	Noise Monitoring & Prevention	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise level at night. PPs must ensure that the biological clock of the villages is not disturbed, by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.
<b>PPs Submission:</b> Complied Unit is maintaining the illumination and noise level well within permissible limits during day and night hours. Detail ambient noise level monitoring report for the period: October -2025 to March - 2026 is enclosed as Annexure-6.		Date: 28/05/2026
13	Noise Monitoring & Prevention	The project proponent shall take measures for control of noise levels below 85dBA in the work environment. The workers engaged in operations of HEMM etc. should be provided with ear plugs / muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/personals/laborers are working without personal protective equipment.
<b>PPs Submission:</b> Complied Regular maintenance (including cabin) of HEMM is being done to keep noise level well within the specified limits. Workers engaged in the operation of HEMM etc. are provided ear plugs. Onsite toolbox talk is being conducted on daily basis and imparted the periodical training for all employee and workmen.		Date: 28/05/2026

14	MINING PLAN	The project proponent shall adhere to the working of mining plan, which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e.: Quantum of mineral waste, over burden, inter burden and top soil. No change in basic mining proposal like mining technology. total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B. & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the ministry of Environment, forest and climate change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to short term permit (STP), query license or any other name.
<b>PPs Submission:</b> Complied Method of mining is opencast, fully mechanized using wet drilling and control blasting. All mining activities are being carried out as per the approved mining plan. Total excavation in MTPA for FY: 2025-26 (October -2025 to March - 2026) as below: Cement Grade Limestone Sub Grade Limestone IB/Screen Reject/ Waste Top Soil 1.36680219 0.0302 0.043646 0.00426		Date: 28/05/2026
15	MINING PLAN	The project proponent shall get the final mine closure plan along with financial assurance approved from Indian bureau of mines/ department of mining & geology as required under the provision of the MMDR Act,1957 and rules /guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned regional office of the ministry of environment, Forest and climate change for the record and verification.
<b>PPs Submission:</b> Agreed to Comply Unit will be submitted the final mine closure plan due course of time.		Date: 28/05/2026
16	MINING PLAN	The land use of the mine area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved mining plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional office.
<b>PPs Submission:</b> Complied There is no back filling proposed in the approved mining plan.		Date: 28/05/2026
17	LAND RECLAMATION	The overburden (O.B.) generated during the mining operations shall be at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved mining plan as per the guidelines /circulars issued by D.G.M.S. w.r.t. Safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The top soil shall be used for land reclamation and plantation.
<b>PPs Submission:</b> Complied Interstitial clay/waste generated during the mining operations are being at earmarked dump sites only. Physical parameters of dumps i.e.: height, width and angle of slope being maintained in compliance of the approved mining plan as per the guidelines /circulars issued by DGMS. Top-soil generation quantity from mining operation in the FY: 2025-26 is 0.00716 Million TPA. It is being		Date: 28/05/2026

used for plantation purpose. Top-soil generation quantity from mining operation in the October - 2025 to March - 2026 is 0.00426 Million TPA. It is being used for plantation purpose.		
18	LAND RECLAMATION	The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width, and angle of slope shall be governed as per the approved mining plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
<b>PPs Submission:</b> Complied Interstitial clay/waste generated during the mining operations are being at earmarked dump sites only. Physical parameters of dumps i.e.: height, width and angle of slope being maintained in compliance of the approved mining plan as per the guidelines /circulars issued by DGMS. Top-soil generation quantity from mining operation in the FY: 2025-26 is 0.00716 Million TPA. It is being used for plantation purpose. Top-soil generation quantity from mining operation in the October - 2025 to March - 2026 is 0.00426 Million TPA. It is being used for plantation purpose.		Date: 28/05/2026
19	LAND RECLAMATION	The reclamation of waste dump sites shall be done in scientific manner as per the approved mining plan cum progressive mine closure plan.
<b>PPs Submission:</b> Complied Agreed, reclamation of waste dump will be done as per the approved mining plan cum progressive mine closure plan.		Date: 28/05/2026
20	LAND RECLAMATION	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plan species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ levelling of dump mass. In critical areas use of geo textiles/geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the dump.
<b>PPs Submission:</b> Complied Presently, total 8 nos. of sub-grade/interstitial clay dumps are in active condition. There are 4 nos. of active dumps of subgrade materials existing in our mine and their dimension in meters are as follows: No. of Dump Length Width Height 1 - South 477 116 12 2 - East 270 114 12 3 - West 209 89 11 4 - West 67 43 3.5 There are 4 nos. of active dumps of Interstitial Clay and their dimension in meters are as under: No. of Dump Length Width Height 2 - West 114 58 9 3 - West 380 27 2.5 4 - NE 552 44 7 5 - NW 274 29 3.4 As per the condition, plantation will be done after the dumps become inactive.		Date: 28/05/2026
21	LAND RECLAMATION	The project proponent shall carry out slope stability in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MOEF&CC.
<b>PPs Submission:</b> Complied Agreed and will be complied, if dump height goes beyond 30m. Presently, dump height is less than 10 m for sub-grade mineral.		Date: 28/05/2026
22	LAND RECLAMATION	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/ Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallahs/River/Pond etc.) The collected water should be utilized for watering the mine area,

		roads, green belt development, plantation etc. the drains/sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.	
		<p><b>PPs Submission: Complied</b>  Rainwater collected in working mine pit and it transfers to non-working mine pits for sedimentation, after proper sedimentation mine water is utilized for various purposes. S.N. Catch Drain/ Garland Drain Dimension 1 West of North Pit Length - 292 m, Width - 1 m, Depth - 1.5 m 2 South West of South Pit Length - 770 m, Width - 1 m, Depth - 1.5 m 3 Around Subgrade dump in NE side of North pit near Charlia Village Length - 380 m, Width - 1 m, Depth - 1.5 m 4 Around Subgrade dump in South side of South Pit Length - 513 m, Width - 1 m, Depth - 1.5 m Constructed six siltation pit with dimension as given below: - S. No. Length (M) Width (M) Depth (M) Capacity (M3) 1 15.5 15 2.45 569.625 2. 18 17 3 918 3. 17 17 3 867 4. 20 16 2.46 787.2 5. 11 8 3 264 6. 9 8 2.5 180 Total 3585.825</p>	Date: 28/05/2026
23	LAND RECLAMATION	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years' data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.	
		<p><b>PPs Submission: Complied</b>  Total rainfall in single day (considering 50 mm maximum rainfall): - 1. Total rainwater would be available is equal to OB dump (area) X Rainfall (m) X Runoff coefficient (20Percentage) i.e.: 57950 m<sup>2</sup> X 0.05 m X 0.20 is equal to 579.5 m<sup>3</sup>. 2. Sub-grade (area) X Rainfall (m) X Runoff coefficient (20Percentage) i.e.: 81280 m<sup>2</sup> X 0.05 m X 0.20 is equal to 812.8 m<sup>3</sup>. 3. The storm water is being collected to garland drain from the periphery of the pit area and waste dump area routed to siltation pond. The collected water is being used for plantation and water sprinkling on haul road.</p>	Date: 28/05/2026
24	LAND RECLAMATION	The top soil, if any, shall temporarily be stored at earmarked sites(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved mining plan and as per the guidelines framed by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered the stability of dumps. The top soil shall be used for land reclamation and plantation purpose.	
		<p><b>PPs Submission: Complied</b>  Topsoil generated during mining operation in FY: 2025-26 (October -2025 to March - 2026) is 0.00426 Million TPA and it is stored at earmarked sites within the mine lease and same is being used for plantation purpose.</p>	Date: 28/05/2026
25	MISCELLANEOUS	No transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal state govt. department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly Vehicular emissions shall be kept under control and regularly monitored.	

		Project should obtain Pollution Under Control(PUC) certificate for all the vehicles from authorized pollution testing centers.
<b>PPs Submission: Complied</b> Not applicable, road does not pass through any villages/habitations. All the minerals are being transported by our own pucca road.		Date: 28/05/2026
26	MISCELLANEOUS	The main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points. material yards etc. should invariably be provide with dust suppression arrangements. The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at crusher, belt –conveyors and other areas prone to air pollution the belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
<b>PPs Submission: Being Complied</b> Tanker-mounted water sprinkling system has been provided for control of fugitive dust emission and regular water sprinkling being carried out on loading and unloading points, transfer points as well as the haul roads to prevent the dust.		Date: 28/05/2026
27	GREENBELT	The project proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
<b>PPs Submission: Complied</b> Plantation details are given as under: Cumulatively, from the start of the mine till date, a total of 82251 saplings have been planted within the lease area and 4,850 saplings outside the lease area. During the financial year 2024-25, 3,800 saplings have been planted within the lease area, with no plantation carried out outside the lease area. A total of 32.41 hectares within the lease area and 1.50 hectares outside the lease area have been covered under plantation cumulatively. Total plantation done in FY 2025-26 is 3590 Nos. have been planted within the lease area.		Date: 28/05/2026
28	GREENBELT	The project proponent shall carryout plantation / afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the state forest department/ Agriculture Department/ Rural development/ Tribal Welfare Department/ gram panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per hectare adequate budgetary provision shall be made for protection and care of trees.
<b>PPs Submission: Complied</b> There is no proposal of backfilling as per approved mining plan.		Date: 28/05/2026
29	GREENBELT	The project proponent shall make necessary alternative arrangements for livestock feed be developing grazing land with a view to compensate those areas which are coming within the mine lease rea. The development of such grazing land shall be done in

		consultation with the state government, in this regard Project proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The Sparse trees on such grazing ground , which provide mid-day shelter from the scorching sun, should be scrupulously guarded / protected against felling and plantation of such trees should be promoted.
<p><b>PPs Submission:</b> Complied</p> <p>The mining lease was originally granted on 25/07/1984 and executed on 13/12/1984, which is prior to the court order. Permission for working in gazing land has been granted by District Authority vide letter No.: Rajasva/Khanan/ NOC/12-12(66)07/199 on 2nd Jan., 2012 and Rajasva/Khanan/NOC/12-12(66)07/228 on 6th Feb., 2012 and Prakaran No.: 5/96 on 27th March, 1996.</p>		<p>Date: 28/05/2026</p>
30	GREENBELT	The project proponent shall undertake all precautionary, measures for conservation and protection of endangered flora and fauna and schedule –I species during mining operation. A wildlife conservation plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The plan shall be approved by Chief Wild Life Warden of the State Govt.
<p><b>PPs Submission:</b> Being Complied</p> <p>A Combined Wildlife Conservation Plan (WLCP) has been prepared for 5 Nos. of captive Limestone Mines and 2 Nos. of Integrated Cement Plant of J K Cement Ltd located within 10 Km radius in Tehsil Nimbahera, Chittorgarh District. The Wildlife Conservation Plan has been forwarded by the DFO - Chittorgarh to Divisional Chief Conservator of Forest vide letter No.: F (5) Survey/UVS/2021-22/4089 dated 13.07.2021 with a total implementation cost of INR 285.30 lakhs for 10 years. The approved plan is being implemented by the State Forest Department. An amount of INR 57.07 Lakh has already been deposited to the Rajasthan Forest Department as per demand note issued by the DFO - Chittorgarh in July-2021.</p>		<p>Date: 28/05/2026</p>
31	GREENBELT	And implemented in consultation with the state Forest and Wildlife Department. A copy of wildlife conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.
<p><b>PPs Submission:</b> Complied</p> <p>Wildlife conservation plan prepared in the consultation of DFO and implementation will also be done according to approved wildlife conservation plan. Annual status will be submitted after final approval of WCP.</p>		<p>Date: 28/05/2026</p>
32	PUBLIC HEARING	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.
<p><b>PPs Submission:</b> Complied</p> <p>Periodical medical examination of workmen is being carried out. Detail of medical examination carried out for the period: October -2025 to March - 2026 is given below is enclosed as Annexure-07 Particular Medical Exam. Carried out (in Nos.) No. of persons examined 1 Initial Medical Examination 0 Periodical Medical Examination 1 Disease observed Nil</p>		<p>Date: 28/05/2026</p>
33	PUBLIC HEARING	The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control

		measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the I-IRA. The I-IRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line I-IRA for all the category of workers and thereafter every five years.
<b>PPs Submission:</b> Complied Company has Zero Harm Goal Policy and periodically identified the hazards and preventive action are being taken. The best practices have been implemented to maintain vibration, fly rocks, dust emission, noise level and all parameters are well within the limit. Mobile medical check-up camps are being organized at all nearby villages for treatment and medicine free of cost.		Date: 28/05/2026
34	PUBLIC HEARING	The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one) must meet ILO criteria (17 x14 inches and of good quality).
<b>PPs Submission:</b> Complied Pre-employment medical check-up are being carried out considering the parameter as per DGMS.		Date: 28/05/2026
35	PUBLIC HEARING	The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 - 24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1) , forced vital capacity (FVC) and the ratio unless they are smokers which has to be adjusted and the effect of age , (d) their hearing should not be affected . as a proof an Audiogram (first and last need to be presented), (e) they should not have developed any persistent back pain, neck pain and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the regional office. MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

<p><b>PPs Submission:</b> Complied Unit is maintaining record of performance indicators for workers. There is not any abnormality has been reported till date, therefore no any relief and compensation required to paid to the workers.</p>		<p>Date: 28/05/2026</p>
36	PUBLIC HEARING	The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
<p><b>PPs Submission:</b> Complied PPEs have been provided and used by the persons engaged in drilling, dozing and loading. VT is being provided as under required VT Rules.</p>		<p>Date: 28/05/2026</p>
37	PUBLIC HEARING	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
<p><b>PPs Submission:</b> Complied All workers engaged belong to the local area and they are living in their own houses, therefore temporary structure/ hutment is not required. Employees are residing in colony situated at Nimbahera Cement Plant, where all basic facilities are available.</p>		<p>Date: 28/05/2026</p>
38	PUBLIC HEARING	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.
<p><b>PPs Submission:</b> Complied Various community-focused activities addressing public concerns have already been completed. Regular maintenance of these assets is being conducted, and record is being maintained.</p>		<p>Date: 28/05/2026</p>
39	Corporate Environmental Responsibility	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O. M. No. 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
<p><b>PPs Submission:</b> Complied Activities proposed for CER are being implemented in a time bound manner and annual report of implementation of the same has been submitted to Regional Office MoEF and CC.</p>		<p>Date: 28/05/2026</p>
40	Corporate Environmental Responsibility	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.

<b>PPs Submission:</b> Complied Complied with		Date: 28/05/2026
41	MISCELLANEOUS	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
<b>PPs Submission:</b> Complied Digital processing report of the entire lease area has been prepared and attached as an Annexure-8.		Date: 28/05/2026
42	MISCELLANEOUS	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
<b>PPs Submission:</b> Complied This is the existing captive limestone mine and Project cost after expansion is 49.29 Crores.		Date: 28/05/2026
43	MISCELLANEOUS	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
<b>PPs Submission:</b> Complied Latest six- monthly compliance reports on the status of the implementation of the stipulated environmental safeguards were sent through email on 29.05.2025 to the MoEF and CC, CPCB and RPCB vide our letter No.: NBH/PC-14/C13, dated 28.05.2025.		Date: 28/05/2026
44	MISCELLANEOUS	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
<b>PPs Submission:</b> Complied A separate environmental management cell with qualified personnel is already established and has sufficient monitoring equipments in environmental laboratory.		Date: 28/05/2026
45	MISCELLANEOUS	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
<b>PPs Submission:</b> Complied Agreed, unit will extend full cooperation to the MoEF and CC officer(s) by furnishing the requisite data / information / monitoring reports.		Date: 28/05/2026
46	MISCELLANEOUS	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
<b>PPs Submission:</b> Complied Noted and agreed.		Date: 28/05/2026
47	MISCELLANEOUS	Concealing factual data or submission of false/ fabricated data and

		failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.
<b>PPs Submission:</b> Complied Noted and Agreed		Date: 28/05/2026
48	MISCELLANEOUS	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Chhattisgarh and any other Court of Law relating to the subject matter.
<b>PPs Submission:</b> Complied Noted and Agreed		Date: 28/05/2026
49	MISCELLANEOUS	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
<b>PPs Submission:</b> Complied Noted and Agreed		Date: 28/05/2026
50	MISCELLANEOUS	This issues with the approval of competent Authority.
<b>PPs Submission:</b> Complied Noted		Date: 28/05/2026
<b>Visit Remarks</b>		
<b>Last Site Visit Report Date:</b>		N/A
<b>Additional Remarks:</b>		Yours Sincerely, For, Karunda Limestone Mine J. K. Cement Work, Nimbahera
<p><b>Note:</b> This acknowledgement is as per the details submitted by project proponent. In no way is this document to be considered as conclusion on any action on the compliance of the project. This is strictly for the project proponent's reference purpose.</p>		



30 years of success Recognized by CPCB under EP Act-1986, Certified by ISO-9001:2015, 14001:2015 & 45001:2018

## TEST REPORT

Sample Number: **JME/JKCW/A/15**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117001**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Near Mine Office (Karunda Mine)**  
**24.69753889**  
**74.61920833**  
**RDS, FPS & BS**  
**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/01**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**08:40 to 08:57 Hrs.**  
**1456.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	13.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

Page 1 of 2

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 Deenak Singh Yadav

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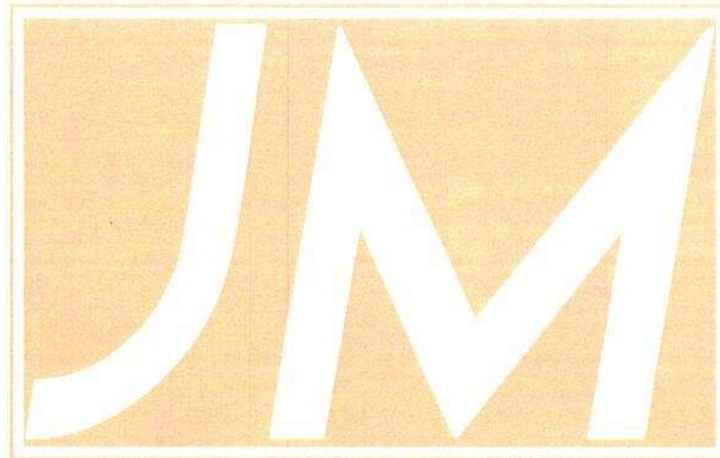
## TEST REPORT

Sample Number: **JME/JKCW/A/15**

Report No.: **JME/A/251117001**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	15.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	11.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	63.7	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	30.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	8.6	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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**\*\*End of Report\*\***



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## TEST REPORT

Sample Number: **JME/JKCW/A/16**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117002**  
 Format No.: **7.5 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Near Ravana Office (Karunda Mine)**  
**24.69714167**  
**74.61882222**  
**RDS, FPS & BS**  
**JME/RDS/02/08, JME/FPS/01/34 & JME/BS/01/02**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**09:10 to 09:22 Hrs.**  
**1452.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	14.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

Page 1 of 2



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**Deepak Singh Yadav**

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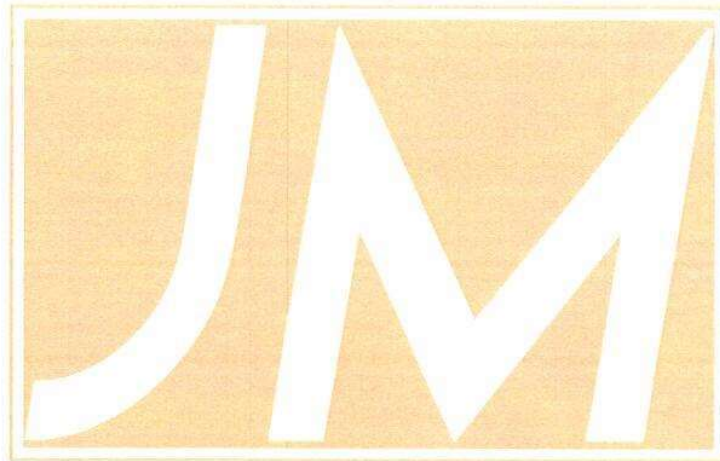
## TEST REPORT

Sample Number: **JME/JKCW/A/16**

Report No.: **JME/A/251117002**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	16.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	14.3	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	66.9	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	31.7	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	6.5	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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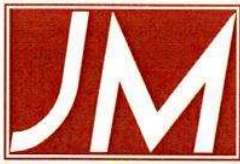
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\*\*End of Report\*\*



## TEST REPORT

Sample Number: **JME/JKCWA/17**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117003**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Charlia Gadia village (Karunda)**  
**24.70433889**  
**74.62389444**  
**RDS, FPS & BS**  
**JME/RDS/01/29, JME/FPS/01/07 & JME/BS/01/04**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**09:30 to 09:35 Hrs.**  
**1445.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	17.2	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

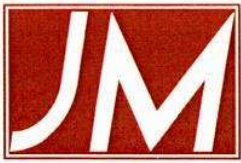
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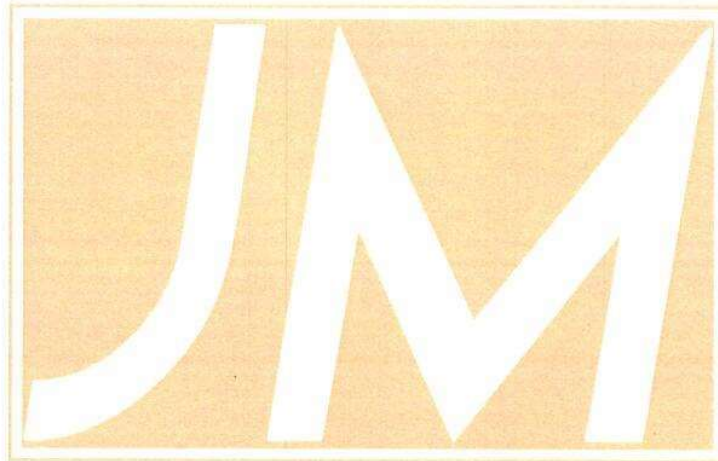
## TEST REPORT

Sample Number: **JME/JKCW/A/17**

Report No.: **JME/A/251117003**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	10.6	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	8.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	58.3	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	27.4	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	3.8	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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\*\*\*End of Report\*\*\*



## TEST REPORT

Sample Number:	<b>JME/JKCW/A/18</b>	Report No.:	<b>JME/A/251117004</b>
Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Format No.:	<b>7.8 F-02</b>
		Party Reference No.:	<b>Nil</b>
		Reporting Date:	<b>20/11/2025</b>
		Analysis Completion Date:	<b>20/11/2025</b>
		Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Karunda village**

Latitude

**24.69724722**

Longitude

**74.60743056**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/07**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Clear Sky**

Date of Monitoring

**12/11/2025 to 13/11/2025**

Time of Monitoring

**10:05 to 10:20 Hrs.**

Duration of Monitoring, (minutes)

**1455.0**

Ambient Temperature (°C)

**Max 30°C, Min 20°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	18.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

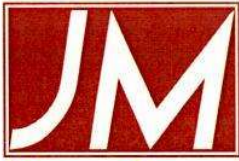
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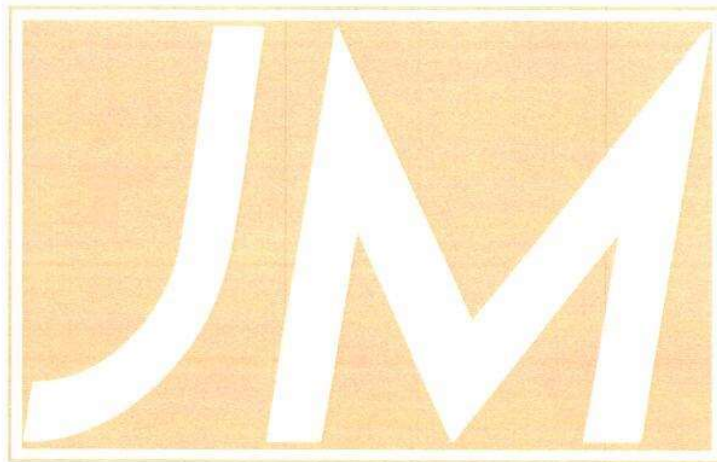
## TEST REPORT

Sample Number: **JME/JKCW/A/18**

Report No.: **JME/A/251117004**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	11.7	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	10.1	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	62.4	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	29.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	5.2	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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## TEST REPORT

Sample Number: **JME/JKCW/A/15** Report No.: **JME/A/260213001**  
 Name & Address of Unit: **Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)** Format No.: **7.8 F-02**  
 Party Reference No.: **NII** Reporting Date: **17/02/2026**  
 Analysis Completion Date: **17/02/2026** Analysis Start Date: **13/02/2026**  
 Receipt Date: **13/02/2026**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Near Mine Office (Karunda Mine)**

Latitude

**24.69753889**

Longitude

**74.61920833**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/01**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Cloudy Sky**

Date of Monitoring

**11/02/2026 to 12/02/2026**

Time of Monitoring

**08:25 to 08:28 Hrs.**

Duration of Monitoring, (minutes)

**1438.0**

Ambient Temperature (°C)

**Max 27°C, Min 16°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	16.1	µg/m <sup>3</sup>	400
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1
5.	Carbon Monoxide	IS: 5182, (Part-10)	0.54	mg/m <sup>3</sup>	4
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20

Page 1 of 2

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Reviewed & Authorized by  
**Sita Ram Yadav**

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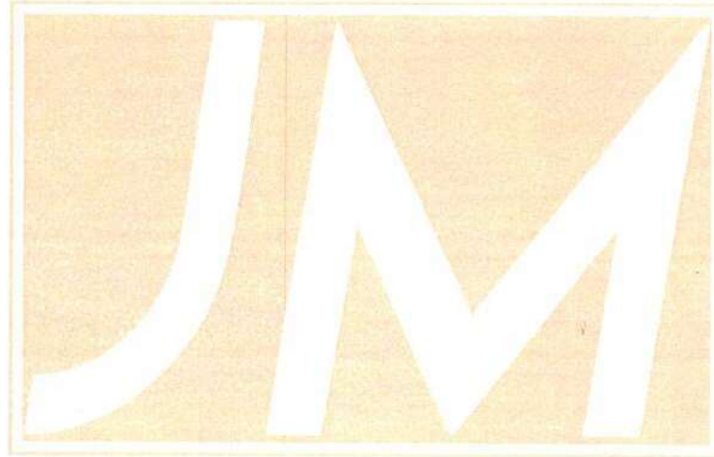
## TEST REPORT

Sample Number: **JME/JKCW/A/15**


Report No.: **JME/A/260213001**

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide	IS: 5182, (Part-6)	19.2	µg/m <sup>3</sup>	80
9.	Ozone	IS: 5182, (Part-9)	18.4	µg/m <sup>3</sup>	180
10.	PM <sub>10</sub>	IS:5182, (Part-23)	71.4	µg/m <sup>3</sup>	100
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	36.2	µg/m <sup>3</sup>	60
12.	Sulphur Dioxide	IS: 5182, (Part-2) sec 1	10.4	µg/m <sup>3</sup>	80

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009.  
BDL- Below Detection Limit, DL- Detection Limit



  
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## TEST REPORT

Sample Number: **JME/JKCW/A/16** Report No.: **JME/A/260213002**  
 Name & Address of Unit: **Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)** Format No.: **7.8 F-02**  
 Party Reference No.: **NII** Reporting Date: **17/02/2026**  
 Analysis Completion Date: **17/02/2026** Analysis Start Date: **13/02/2026**  
 Receipt Date: **13/02/2026**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Near Ravana Office (Karunda Mine)**

Latitude

**24.69714167**

Longitude

**74.61882222**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/08, JME/FPS/01/34 & JME/BS/01/02**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Cloudy Sky**

Date of Monitoring

**11/02/2026 to 12/02/2026**

Time of Monitoring

**09:37 to 09:41 Hrs.**

Duration of Monitoring, (minutes)

**1416.0**

Ambient Temperature (°C)

**Max 27°C, Min 16°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	18.3	µg/m <sup>3</sup>	400
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	0.59	ng/m <sup>3</sup>	1
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20

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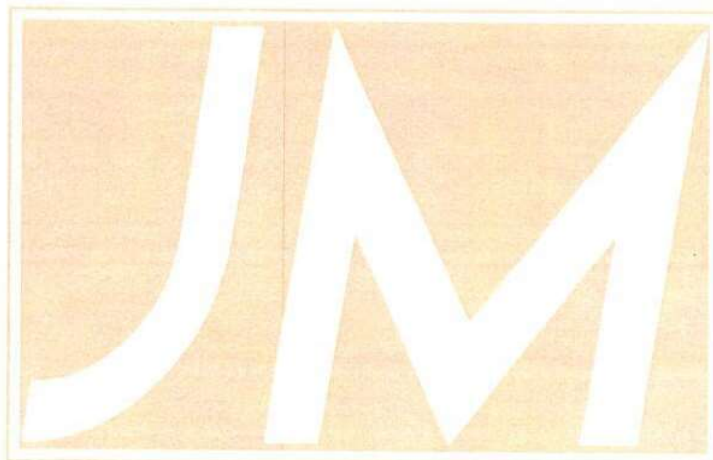
## TEST REPORT

Sample Number: **JME/JKCW/A/16**

Report No.: **JME/A/260213002**

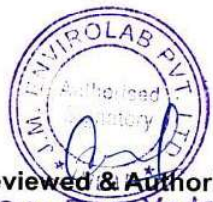
S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide	IS: 5182, (Part-6)	21.4	µg/m <sup>3</sup>	80
9.	Ozone	IS: 5182, (Part-9)	23.6	µg/m <sup>3</sup>	180
10.	PM <sub>10</sub>	IS:5182, (Part-23)	74.8	µg/m <sup>3</sup>	100
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	36.9	µg/m <sup>3</sup>	60
12.	Sulphur Dioxide	IS: 5182, (Part-2) sec 1	11.4	µg/m <sup>3</sup>	80

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009.  
BDL- Below Detection Limit, DL- Detection Limit



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## TEST REPORT

Sample Number: **JME/JKCW/A/17** Report No.: **JME/A/260213003**  
 Name & Address of Unit: **Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)** Format No.: **7.8 F-02**  
 Party Reference No.: **NII** Reporting Date: **17/02/2026**  
 Analysis Completion Date: **17/02/2026** Analysis Start Date: **13/02/2026**  
 Receipt Date: **13/02/2026**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Charlia Gadia village (Karunda)**

Latitude

**24.70433889**

Longitude

**74.62389444**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/01/29, JME/FPS/01/07 & JME/BS/01/04**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Cloudy Sky**

Date of Monitoring

**11/02/2026 to 12/02/2026**

Time of Monitoring

**10:15 to 10:20 Hrs.**

Duration of Monitoring, (minutes)

**1407.0**

Ambient Temperature (°C)

**Max 27°C, Min 16°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	24.6	µg/m <sup>3</sup>	400
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1
5.	Carbon Monoxide	IS: 5182, (Part-10)	0.53	mg/m <sup>3</sup>	4
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20

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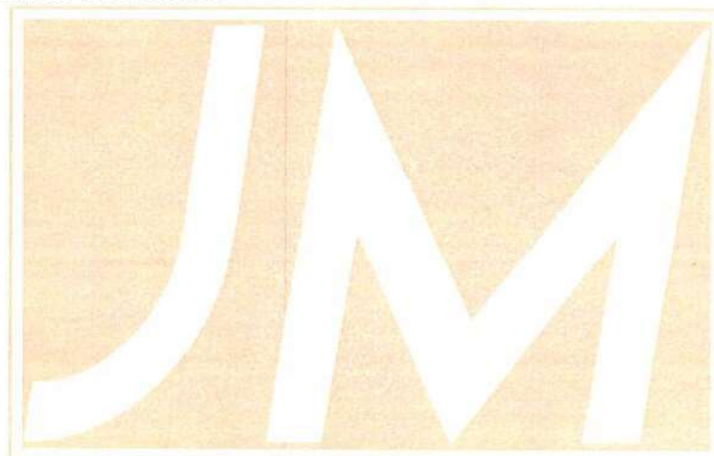
## TEST REPORT

Sample Number: **JME/JKCW/A/17**

Report No.: **JME/A/260213003**

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide	IS: 5182, (Part-6)	16.4	µg/m <sup>3</sup>	80
9.	Ozone	IS: 5182, (Part-9)	19.0	µg/m <sup>3</sup>	180
10.	PM <sub>10</sub>	IS:5182, (Part-23)	65.2	µg/m <sup>3</sup>	100
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	30.3	µg/m <sup>3</sup>	60
12.	Sulphur Dioxide	IS: 5182, (Part-2) sec 1	9.4	µg/m <sup>3</sup>	80

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009.  
BDL- Below Detection Limit, DL- Detection Limit



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## TEST REPORT

Sample Number: **JME/JKCWA/18** Report No.: **JME/A/260213004**  
 Name & Address of Unit: **Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)** Format No.: **7.8 F-02**  
 Party Reference No.: **NII** Reporting Date: **17/02/2026**  
 Analysis Completion Date: **17/02/2026** Analysis Start Date: **13/02/2026**  
 Receipt Date: **13/02/2026**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Karunda village**

Latitude

**24.69724722**

Longitude

**74.60743056**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/01, JME/FPS/01/12 & JME/BS/01/05**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Cloudy Sky**

Date of Monitoring

**11/02/2026 to 12/02/2026**

Time of Monitoring

**12:40 to 12:40 Hrs.**

Duration of Monitoring, (minutes)

**1358.0**

Ambient Temperature (°C)

**Max 27°C, Min 16°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	27.0	µg/m <sup>3</sup>	400
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1
5.	Carbon Monoxide	IS: 5182, (Part-10)	0.59	mg/m <sup>3</sup>	4
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20

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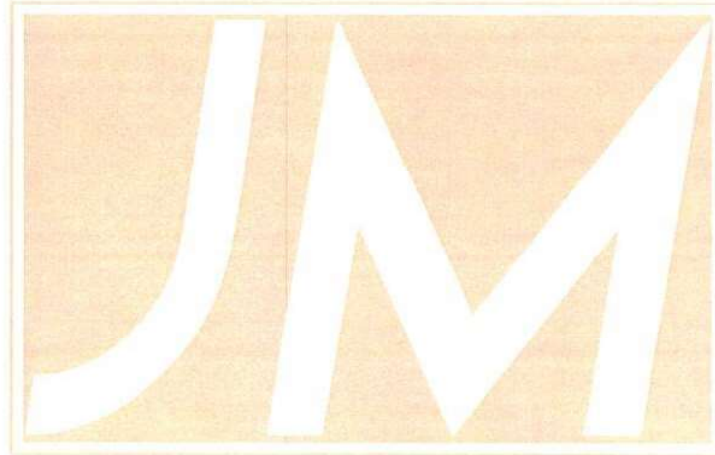
## TEST REPORT

Sample Number: **JME/JKCW/A/18**

Report No.: **JME/A/260213004**


S. No.	Test Parameters	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide	IS: 5182, (Part-6)	18.2	µg/m <sup>3</sup>	80
9.	Ozone	IS: 5182, (Part-9)	21.0	µg/m <sup>3</sup>	180
10.	PM <sub>10</sub>	IS:5182, (Part-23)	67.1	µg/m <sup>3</sup>	100
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	28.8	µg/m <sup>3</sup>	60
12.	Sulphur Dioxide	IS: 5182, (Part-2) sec 1	7.6	µg/m <sup>3</sup>	80

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009.  
BDL- Below Detection Limit, DL- Detection Limit



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\*\*End of Report\*\*



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## TEST REPORT

Sample Number: **JME/JKCW/A/15**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117001**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Near Mine Office (Karunda Mine)**  
**24.69753889**  
**74.61920833**  
**RDS, FPS & BS**  
**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/01**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**08:40 to 08:57 Hrs.**  
**1456.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	13.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

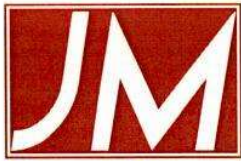
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#### Corporate Office

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 Ext. Road, Sector-61, Gurugram-122011(Haryana)



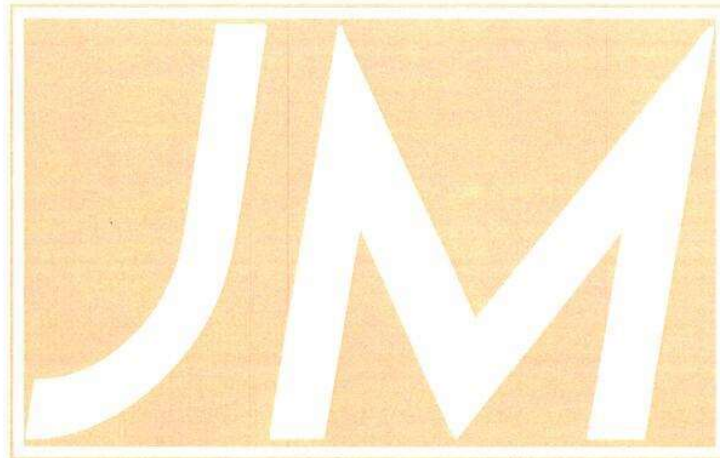
## TEST REPORT

Sample Number: **JME/JKCW/A/15**

Report No.: **JME/A/251117001**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	15.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	11.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	63.7	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	30.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	8.6	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



Page 2 of 2

  
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 Deepak Singh Yadav

  
 Reviewed & Authorized by  
 Sita Ram Yadav

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## TEST REPORT

Sample Number: **JME/JKCW/A/16**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117002**  
 Format No.: **7.5 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Near Ravana Office (Karunda Mine)**  
**24.69714167**  
**74.61882222**  
**RDS, FPS & BS**  
**JME/RDS/02/08, JME/FPS/01/34 & JME/BS/01/02**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**09:10 to 09:22 Hrs.**  
**1452.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	14.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

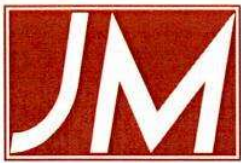
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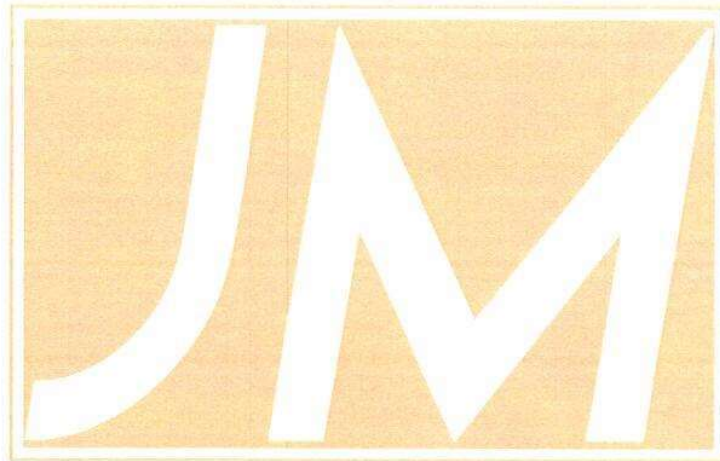
## TEST REPORT

Sample Number: **JME/JKCW/A/16**

Report No.: **JME/A/251117002**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	16.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	14.3	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	66.9	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	31.7	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	6.5	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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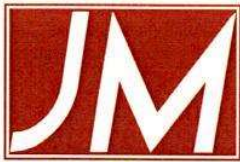
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\*\*End of Report\*\*



## TEST REPORT

Sample Number: **JME/JKCWA/17**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117003**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**

**JMELPL Team**

**Charlia Gadia village (Karunda)**

**24.70433889**

**74.62389444**

**RDS, FPS & BS**

**JME/RDS/01/29, JME/FPS/01/07 & JME/BS/01/04**

**Calibrated**

**Regulatory Requirement**

**Clear Sky**

**12/11/2025 to 13/11/2025**

**09:30 to 09:35 Hrs.**

**1445.0**

**Max 30°C, Min 20°C**

**Vehicular Activities & Mine Operations**

**--**

**JMELPL/STOP/04**

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	17.2	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

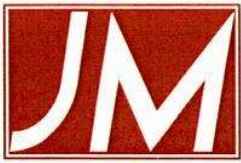
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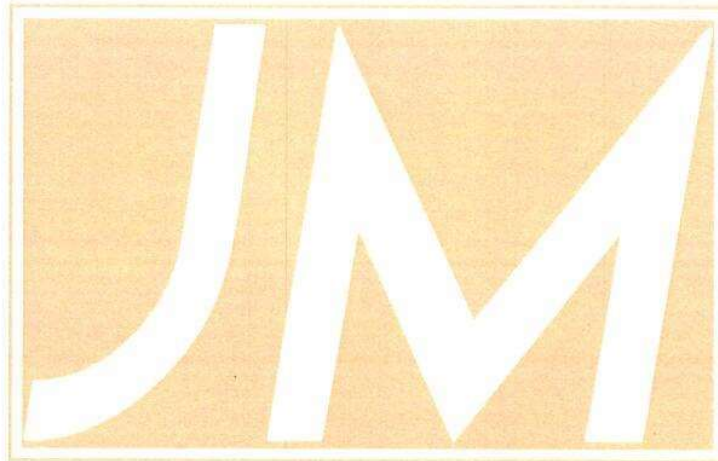
## TEST REPORT

Sample Number: **JME/JKCW/A/17**

Report No.: **JME/A/251117003**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	10.6	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	8.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	58.3	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	27.4	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	3.8	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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\*\*\*End of Report\*\*\*



## TEST REPORT

Sample Number:	<b>JME/JKCW/A/18</b>	Report No.:	<b>JME/A/251117004</b>
Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Format No.:	<b>7.8 F-02</b>
		Party Reference No.:	<b>Nil</b>
		Reporting Date:	<b>20/11/2025</b>
		Analysis Completion Date:	<b>20/11/2025</b>
		Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Karunda village**

Latitude

**24.69724722**

Longitude

**74.60743056**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/07**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Clear Sky**

Date of Monitoring

**12/11/2025 to 13/11/2025**

Time of Monitoring

**10:05 to 10:20 Hrs.**

Duration of Monitoring, (minutes)

**1455.0**

Ambient Temperature (°C)

**Max 30°C, Min 20°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	18.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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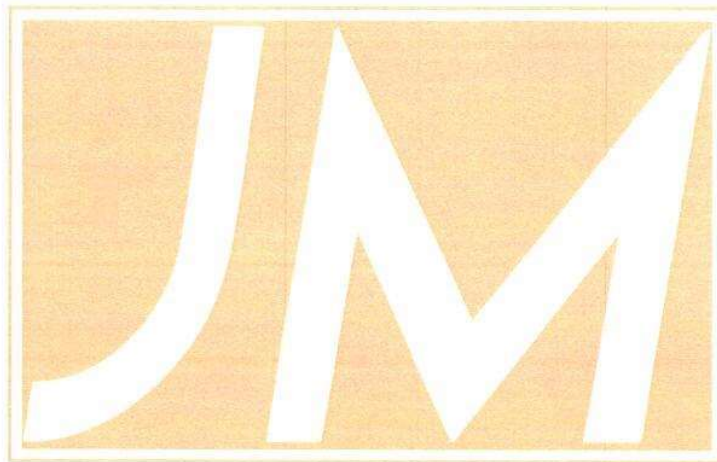
## TEST REPORT

Sample Number: **JME/JKCW/A/18**

Report No.: **JME/A/251117004**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	11.7	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	10.1	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	62.4	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	29.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	5.2	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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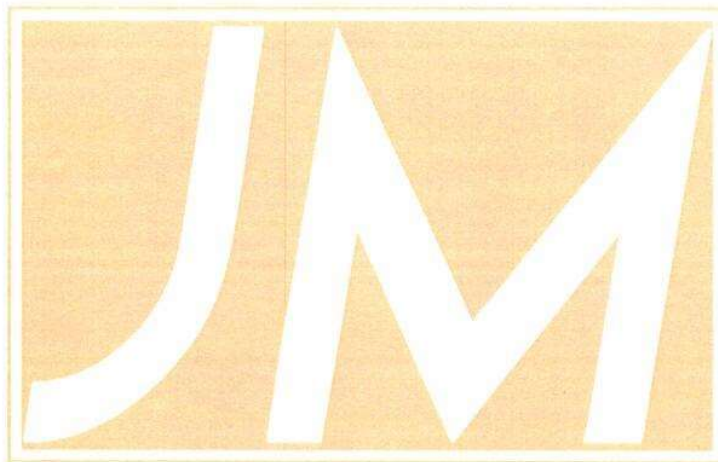
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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/251117001</b>
Sample Description:	<b>FUGITIVE EMISSION</b>	Reporting Date:	<b>20/11/2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>20/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>JMELPL/STOP/03</b>

### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO (mg/m <sup>3</sup> )
1.	3-10-meter distance from drilling point of Karunda Mines	13/11/2025	352.0	5.8	11.5	0.52
Limit as per CTO			600	-	-	-



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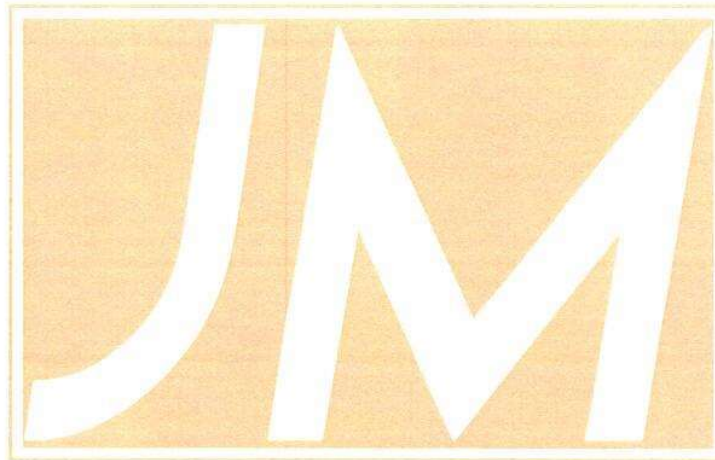
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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/251117002</b>
Sample Description:	<b>FUGITIVE DUST EMISSION</b>	Reporting Date:	<b>20/11/2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>20/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>JMELPL/STOP/03</b>

### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )
1.	Near Loading point of Karunda Mine	13/11/2025	354.0	5.3	10.4	0.57
Limit as per CTO			600	-	-	-



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Deepak Singh Yadav

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Sita Ram Yadav



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\*\*End of Report\*\*



# J.M. ENVIROLAB PVT. LTD.

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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/AN/251117001-002</b>
Sample Description:	<b>AMBIENT NOISE LEVEL MONITORING</b>	Reporting Date:	<b>20/11//2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Receipt Date:	<b>17/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Equipment Used:	<b>Sound Level Meter</b>
		Duration of Monitoring:	<b>24 Hours</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>IS 9989</b>

### TEST RESULTS

Monitoring Locations	Date of Monitoring	Day Time (06:00 AM to 10:00 PM)			Night Time (10:00 PM to 06:00 AM)		
		Min.	Max.	Leq in dB(A)	Min.	Max.	Leq in dB(A)
Near Mine Office, Karunda Mine	13/11//2025	54.6	65.9	62.3	44.2	61.8	47.1
Near Ravana Office, Karunda Mine	13/11//2025	50.4	62.5	59.7	43.8	58.4	46.5

### CPCB NOISE STANDARDS

Category of Zones	Leq in dB(A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

1. Day Time is from 06.00 AM to 10.00 PM.  
 2. Night Time is reckoned between 10.00 PM to 06.00 AM  
 3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.  
**Note:** Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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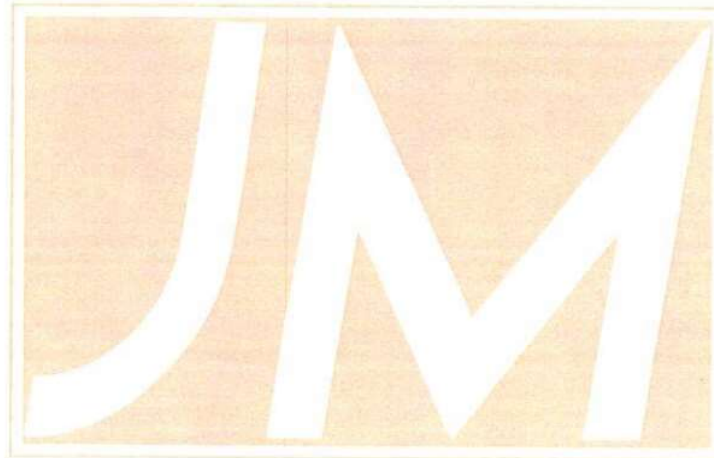
Reg. Office & Lab. : 424, Ground Floor, Udyog Vihar Phase-IV, Gurugram, Haryana, India  
E-mail: jmenvirolab@hotmail.com www.jmenvirolab.com

## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/260213002</b>
Sample Description:	<b>FUGITIVE DUST EMISSION</b>	Reporting Date:	<b>17/02/2026</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>17/02/2026</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>13/02/2026</b>
		Receipt Date:	<b>13/02/2026</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling & Testing Protocol:	<b>JMELPL/STOP/03</b>


### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )
1.	Near Loading point of Karunda Mine	11/02/2026	368.0	6.6	15.4	0.62
Limit as per CTO			600	-	-	-



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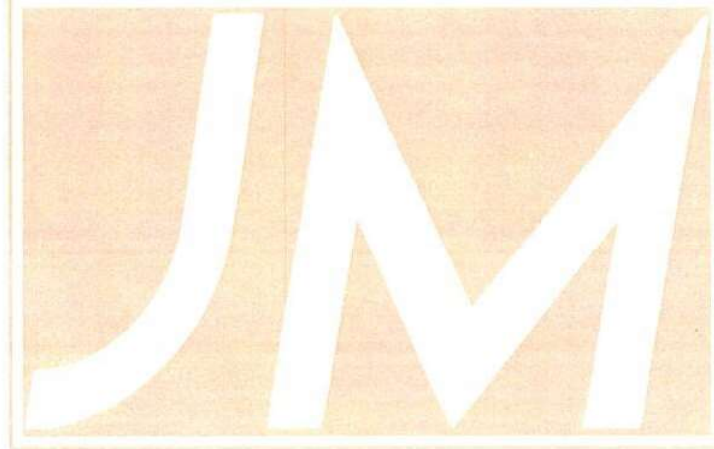
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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/260213001</b>
Sample Description:	<b>FUGITIVE DUST EMISSION</b>	Reporting Date:	<b>17/02/2026</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>17/02/2026</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>13/02/2026</b>
		Receipt Date:	<b>13/02/2026</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling & Testing Protocol:	<b>JMELPL/STOP/03</b>

### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO (mg/m <sup>3</sup> )
1.	3-10-meter distance from drilling point of Karunda Mines	11/02/2026	387.0	8.8	17.4	0.57
Limit as per CTO			600	-	-	-



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Parameter Report	
JK Cement Works	
<b>Generated On :</b> 2026-05-20 06:11:02	<b>Generated By :</b> Environment Nimbahera
<b>Duration :</b> 2025-10-01T00:00:00+05:30 - 2026-03-31T23:59:00+05:30	<b>Sub Locations :</b> Telemetry BW_7 (Karunda Mine)
<b>Parameters :</b> Water Level	

S.no	Time	Telemetry BW_7 (Karunda Mine) Water Level (m)(avg)
1	2025-10-01T00:00:00+05:30	6.67
2	2025-11-01T00:00:00+05:30	6.8
3	2025-12-01T00:00:00+05:30	7.83
4	2026-01-01T00:00:00+05:30	8.9
5	2026-02-01T00:00:00+05:30	9.32
6	2026-03-01T00:00:00+05:30	10.91



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## TEST REPORT

Sample Number	<b>JME/KLM/W/01</b>	Report No	<b>JME/W/251110228</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic Water (Mines Office Tube Well Ground water)</b>	Reporting Date	<b>17/11/2025</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/11/2025</b>
Sample collected by	<b>JMEPL Team</b>	Analysis Start Date:	<b>10/11/2025</b>
Latitude	<b>24.697583 N</b>	Receipt Date	<b>10/11/2025</b>
Longitude	<b>74.619197 E</b>	Sampling Date	<b>07/11/2025</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 27°C, Cloudy Sky</b>
		Sample Quantity	<b>5.0 Litre</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Parameters	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.74	-	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 (Part 4)	BDL (DL 1.0)	Hazen Unit	5	15
3.	Turbidity	IS:3025 (Part-10)	BDL (DL 1.0)	NTU	1	5
4.	Odour	IS:3025 (Part-5)	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS:3025 (Part-8)	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	165.0	mg/l	200	600
7.	Calcium as Ca	IS:3025 (Part-40)	35.40	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	120.8	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part-32)	102.1	mg/l	250	1000
10.	Residual free Chlorine	IS:3025 (Part-26)	BDL (DL 0.20)	mg/l	0.2	1.0
11.	Cyanide as CN	IS:3025 (Part-27)	BDL (DL 0.02)	mg/l	0.05	No Relaxation
12.	Magnesium as Mg	IS:3025 (Part-46)	18.61	mg/l	30	100
13.	Total Dissolved Solids	IS:3025 (Part-16)	396.0	mg/l	500	2000
14.	Sulphate as SO <sub>4</sub>	APHA 23rd Edition, 4500-SO <sub>4</sub> -C/D/E	28.20	mg/l	200	400
15.	Fluoride as F	APHA 23rd Edition, 4500-F- D	0.51	mg/l	1	1.5
16.	Nitrate as NO <sub>3</sub> -N	IS:3025 (Part-34)	7.12	mg/l	45	No Relaxation
17.	Iron as Fe	IS:3025 (Part-53)	0.07	mg/l	1	No Relaxation
18.	Aluminium as Al	IS:3025 (Part-55)	BDL(DL 0.03)	mg/l	0.03	0.2
19.	Boron	IS:3025 (Part-57)	BDL(DL 0.20)	mg/l	0.5	2.4

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## TEST REPORT

Sample Number

JME/KLM/W/01

Report No

JME/W/251110228

S. No.	Parameters	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
20.	Phenolic Compounds	APHA 23rd Edition, 5530-Phenols-C/D	BDL(DL 0.001)	mg/l	0.001	0.002
21.	Anionic Detergents as MBAS	APHA 23rd Edition, 5540-C	BDL(DL 0.02)	mg/l	0.2	1
22.	Hexa Chromium as Cr+6	IS:3025 (Part-52)	BDL(DL 0.03)	mg/l	--	--
23.	Zinc as Zn	IS:3025 (Part-49)	BDL (DL 0.0005)	mg/l	5	15
24.	Copper as Cu	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l	0.05	1.5
25.	Manganese as Mn	IS:3025 (Part-59)	BDL (DL 0.01)	mg/l	0.1	0.3
26.	Cadmium as Cd	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l	0.01	No Relaxation
28.	Selenium as Se	IS:3025 (Part-56)	BDL(DL 0.005)	mg/l	0.01	No Relaxation
29.	Arsenic as As	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l	0.001	No Relaxation
31.	Sulphide (as H <sub>2</sub> S)	IS 3025 (Part 29)	BDL (DL 0.05)	mg/l	0.05	No Relaxation
32.	Ammonia (NH <sub>3</sub> -N)	APHA 24th Edition 4500-NH <sub>3</sub> F : 2023	BDL (DL 0.1)	mg/l	0.5	No Relaxation
33.	Chloramines as Cl <sub>2</sub>	APHA 24th Edition 4500-Cl-G: 2023	BDL (DL 0.01)	mg/l	4.0	No Relaxation
34.	Chromium (Cr)	IS 3025 (Part 52)	BDL (DL 0.002)	mg/l	0.05	No Relaxation
35.	Barium as Ba	APHA ,24th Edition 3500 -Ba: 2023	BDL (DL 0.01)	mg/l	0.7	No Relaxation
36.	Silver (Ag)	APHA, 24th, edition 3111 B-C: 2023	BDL (DL 0.05)	mg/l	0.1	No Relaxation

Note: BDL- Below Detection Limit, DL- Detection Limit

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## TEST REPORT

Sample Number	JME/KLM/W/01	Report No	JME/W/251110228
Name & Address of Unit	Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiaasthan (INDIA)	Format No.	7.8 F-01
Sample Description	Ground Water	Party Reference No.	Nil
Sampling Location	Portable & Domestic water (Mines Office Tube Well Ground water)	Reporting Date	17/11/2025
Client Representative (Name & Designation)	Mr. Chandrakant Tiwari (Sr. Manager)	Analysis Completion Date:	17/11/2025
Sample collected by	JMEPL Team	Analysis Start Date:	10/11/2025
Latitude	24.697583 N	Receipt Date	10/11/2025
Longitude	74.619197 E	Sampling Date	07/11/2025
Packing status:	Temporary sealed	Sampling Type	Grab
Sampling Protocol	JMELPL/STOP/04	Preservation	Refrigerated
		Environmental Condition during Sampling	Ambient Temp. 27°C, Cloudy Sky
		Sample Quantity	250 ml
		Parameter Required	As per work order

### TEST RESULTS

S. No.	Parameters	Test Method	Result	Unit	Specification as per IS 10500-2012
1.	<i>E. coli</i>	IS 15185: 2016	Absent	per 100ml	Shall not be detectable in any 100 ml sample
2.	Total Coliform	IS 15185: 2016	Absent	per 100ml	Shall not be detectable in any 100 ml sample

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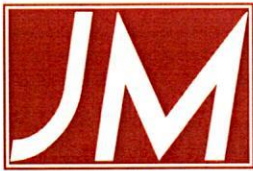
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## TEST REPORT

Sample Number	<b>JME/KLM/W/02</b>	Report No	<b>JME/W/251110229</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic water (Hand pump Near village Charliya Ground water)</b>	Reporting Date	<b>17/11/2025</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/11/2025</b>
Sample collected by	<b>JMEPL Team</b>	Analysis Start Date:	<b>10/11/2025</b>
Latitude	<b>24.702892 N</b>	Receipt Date	<b>10/11/2025</b>
Longitude	<b>74.623352 E</b>	Sampling Date	<b>07/11/2025</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 27°C, Cloudy Sky</b>
		Sample Quantity	<b>5.0 Litre</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Parameters	Testing Protocol	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.62	-	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 (Part 4)	BDL (DL 1.0)	Hazen Unit	5	15
3.	Turbidity	IS:3025 (Part-10)	BDL (DL 1.0)	NTU	1	5
4.	Odour	IS:3025 (Part-5)	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS:3025 (Part-8)	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	405.0	mg/l	200	600
7.	Calcium as Ca	IS:3025 (Part-40)	110.2	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	222.4	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part-32)	125.6	mg/l	250	1000
10.	Residual free Chlorine	IS:3025 (Part-26)	BDL (DL 0.20)	mg/l	0.2	1.0
11.	Cyanide as CN	IS:3025 (Part-27)	BDL (DL 0.02)	mg/l	0.05	No Relaxation
12.	Magnesium as Mg	IS:3025 (Part-46)	31.55	mg/l	30	100
13.	Total Dissolved Solids	IS:3025 (Part-16)	532.0	mg/l	500	2000
14.	Sulphate as SO <sub>4</sub>	APHA 23rd Edition, 4500-SO <sub>4</sub> -C/D/E	32.14	mg/l	200	400
15.	Fluoride as F	APHA 23rd Edition, 4500-F- D	0.51	mg/l	1	1.5
16.	Nitrate as NO <sub>3</sub> -N	IS:3025 (Part-34)	10.21	mg/l	45	No Relaxation
17.	Iron as Fe	IS:3025 (Part-53)	0.12	mg/l	1	No Relaxation
18.	Aluminium as Al	IS:3025 (Part-55)	BDL(DL 0.03)	mg/l	0.03	0.2
19.	Boron	IS:3025 (Part-57)	BDL(DL 0.20)	mg/l	0.5	2.4

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**Corporate Office**

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Ext. Road, Sector-61, Gurugram-122011(Haryana)



# J.M. ENVIROLAB PVT. LTD.

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## TEST REPORT

Sample Number

JME/KLM/W/02

Report No

JME/W/251110229

S. No.	Parameters	Testing Protocol	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
20.	Phenolic Compounds	APHA 23rd Edition, 5530-Phenols-C/D	BDL (DL 0.001)	mg/l	0.001	0.002
21.	Anionic Detergents as MBAS	APHA 23rd Edition, 5540-C	BDL (DL 0.02)	mg/l	0.2	1
22.	Hexa Chromium as Cr+6	IS:3025 (Part-52)	BDL (DL 0.03)	mg/l	--	--
23.	Zinc as Zn	IS:3025 (Part-49)	BDL (DL 0.0005)	mg/l	5	15
24.	Copper as Cu	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l	0.05	1.5
25.	Manganese as Mn	IS:3025 (Part-59)	BDL (DL 0.01)	mg/l	0.1	0.3
26.	Cadmium as Cd	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l	0.01	No Relaxation
28.	Selenium as Se	IS:3025 (Part-56)	BDL (DL 0.005)	mg/l	0.01	No Relaxation
29.	Arsenic as As	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l	0.001	No Relaxation
31.	Sulphide (as H <sub>2</sub> S)	IS 3025 (Part 29)	BDL (DL 0.05)	mg/l	0.05	No Relaxation
32.	Ammonia (NH <sub>3</sub> -N)	APHA 24th Edition 4500-NH <sub>3</sub> F : 2023	BDL (DL 0.1)	mg/l	0.5	No Relaxation
33.	Chloramines as Cl <sub>2</sub>	APHA 24th Edition 4500-Cl-G: 2023	BDL (DL 0.01)	mg/l	4.0	No Relaxation
34.	Chromium (Cr)	IS 3025 (Part 52)	BDL (DL 0.002)	mg/l	0.05	No Relaxation
35.	Barium as Ba	APHA ,24th Edition 3500 -Ba: 2023	BDL (DL 0.01)	mg/l	0.7	No Relaxation
36.	Silver (Ag)	APHA, 24th, edition 3111 B-C: 2023	BDL (DL 0.05)	mg/l	0.1	No Relaxation

Note: BDL- Below Detection Limit, DL- Detection Limit

Page 2 of 3

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Srishti Mehta

Reviewed & Authorized by  
Rajkumar Yadav

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**Reg. Office & Lab.**

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## TEST REPORT

Sample Number	JME/KLM/W/02	Report No	JME/W/251110229
Name & Address of Unit	Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiaasthan (INDIA)	Format No.	7.8 F-01
Sample Description	Ground Water	Party Reference No.	Nil
Sampling Location	Portable & Domestic water (Hand pump Near village Charliya Ground water)	Reporting Date	17/11/2025
Client Representative (Name & Designation)	Mr. Chandrakant Tiwari (Sr. Manager)	Analysis Completion Date:	17/11/2025
Sample collected by	JMEPL Team	Analysis Start Date:	10/11/2025
Latitude	24.702892 N	Receipt Date	10/11/2025
Longitude	74.623352 E	Sampling Date	07/11/2025
Packing status:	Temporary sealed	Sampling Type	Grab
Sampling Protocol	JMELPL/STOP/04	Preservation	Refrigerated
		Environmental Condition during Sampling	Ambient Temp. 27°C, Cloudy Sky
		Sample Quantity	250 ml
		Parameter Required	As per work order

### TEST RESULTS

S. No.	Parameters	Testing protocol	Result	Unit	Specification as per IS 10500-2012
1.	<i>E. coli</i>	IS 15185: 2016	Absent	per 100ml	Shall not be detectable in any 100 ml sample
2.	Total Coliform	IS 15185: 2016	Absent	per 100ml	Shall not be detectable in any 100 ml sample

Page 3 of 3

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Srishti Mehta

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Sukumar Yadav

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\*\*End of Report\*\*



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## TEST REPORT

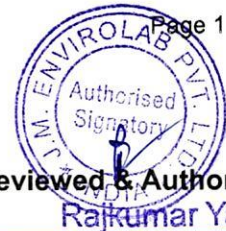
Sample Number:	<b>JME/KLM/SW/01</b>	Report No.:	<b>JME/SW/251110041</b>
Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Format No.:	<b>7.8 F-01</b>
Sample Description:	<b>Surface Water</b>	Party Reference:	<b>Nil</b>
Sample Location:	<b>Portable &amp; Domestic water- (Karunda Mine-Pit water Surface Water)</b>	Reporting Date:	<b>17/11/2025</b>
Client Representative (Name & Designation):	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/11/2025</b>
Sample collected by	<b>JMEPL Team</b>	Analysis Start Date:	<b>10/11/2025</b>
Latitude :	<b>24.697772 N</b>	Receipt Date:	<b>10/11/2025</b>
Longitude :	<b>74.618393 E</b>	Sampling Date:	<b>07/11/2025</b>
Sampling Protocol:	<b>JMELPL/STOP/04</b>	Sampling Type	<b>Grab</b>
		Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 29°C; Cloudy Sky</b>
		Sample Quantity	<b>Approx. 5.0 Litre</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Parameters	Test Method	Result	Unit
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.51	-
2.	Colour	IS:3025 (Part 4)	BDL(DL 1.0)	Hazen Unit
3.	Odour	IS:3025 (Part-5)	Agreeable	-
4.	Conductivity	IS:3025 (Part-14)	612.0	µS/cm
5.	Turbidity	IS:3025 (Part-10)	BDL(DL 1.0)	NTU
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	287.0	mg/l
7.	Calcium as Ca	IS:3025 (Part-40)	84.25	mg/l
8.	Magnesium as Mg	IS:3025 (Part-46)	18.62	mg/l
9.	Chloride as Cl	IS:3025 (Part-32)	58.74	mg/l
10.	Total Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	152.7	mg/l
11.	Residual Chlorine	IS:3025 (Part-26)	BDL (DL 0.2)	mg/l
12.	Cyanide	IS:3025 (Part-27) Sec 1	BDL (DL 0.02)	mg/l
13.	Dissolved Oxygen	IS:3025 (Part-38)	6.5	mg/l
14.	Chemical Oxygen Demand (COD)	IS:3025 (Part-58)	BDL (DL 1.0)	mg/l
15.	Biochemical Oxygen Demand (BOD)	IS:3025 (Part-44)	BDL (DL 1.0)	mg/l
16.	Total Dissolved Solids	IS:3025 (Part-16)	416.0	mg/l
17.	Total Suspended Solid	IS:3025 (Part-17)	4.8	mg/l
18.	Sodium as Na	IS:3025 (Part-45)	60.0	mg/l
19.	Potassium as K	IS:3025 (Part-45)	10.0	mg/l
20.	Sulphate as SO <sub>4</sub>	APHA 24th Edition, 4500-SO <sub>4</sub> -E	26.24	mg/l
21.	Fluoride as F	APHA 24 <sup>th</sup> Edition, 4500-F- D	0.60	mg/l
22.	Nitrogen Nitrate as NO <sub>3</sub> -N	IS:3025 (Part-34) Sec 1 6.3 Cadmium Reduction Method	3.17	mg/l
23.	Iron as Fe	IS:3025 (Part-53)	0.09	mg/l

Page 1 of 2

*Saishli*  
Checked by  
**Brishti Mehta**



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**Rajkumar Yadav**

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## TEST REPORT

Sample Number: **JME/KLM/SW/01**

Report No.: **JME/SW/251110041**

S. No.	Parameters	Testing Protocol	Result	Unit
24.	Phosphate as Po <sub>4</sub>	APHA 24 <sup>th</sup> Edition 4500-P-C/D	BDL (DL 0.02)	mg/l
25.	Phenols	APHA 24 <sup>th</sup> Edition, 5530-Phenols- D Direct Photometric	BDL (DL 0.001)	mg/l
26.	Hexa Chromium as Cr <sub>6+</sub>	IS:3025 (Part-52)	BDL (DL 0.03)	mg/l
27.	Boron as B	IS:3025 (Part-57)	BDL (DL 0.2)	mg/l
28.	Aluminium as Al	IS:3025 (Part-55)	BDL (DL 0.03)	mg/l
29.	Anionic Surfactant	APHA 24 <sup>th</sup> Edition, 5440 C	BDL (DL 0.02)	mg/l
30.	Arsenic as As	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l
31.	Mercury as Hg	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l
32.	Selenium	IS:3025 (Part-56)	BDL (DL 0.005)	mg/l
33.	Cadmium as Cd	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l
34.	Lead as Pb	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l
35.	Nickel	IS:3025 (Part-54)	BDL (DL 0.005)	mg/l
36.	Zinc as Zn	IS:3025 (Part-49)	BDL (DL 0.0005)	mg/l
37.	Manganese as Mn	IS:3025 (Part-59)	BDL (DL 0.01)	mg/l
38.	Copper as Cu	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l

Note: BDL – Below Detection Limit, DL - Detection Limit

Page 2 of 2

Checked by  
*Srishti Mehta*  
Srishti Mehta

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*Rajkumar Yadav*  
Rajkumar Yadav

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\*\*End of Report\*\*



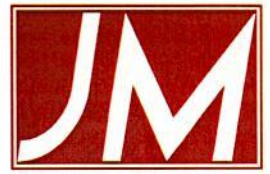
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## TEST REPORT

Sample Number	<b>JME/KLM/W/01</b>	Report No	<b>JME/W/260113228</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiaasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic Water (Mines Office Tube Well Ground water)</b>	Reporting Date	<b>17/01/2026</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/01/2026</b>
Sample collected by	<b>JMELPL Team</b>	Analysis Start Date:	<b>13/01/2026</b>
Latitude	<b>24.697583 N</b>	Receipt Date	<b>13/01/2026</b>
Longitude	<b>74.619197 E</b>	Sampling Date	<b>12/01/2026</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 17°C, Cloudy Sky</b>
		Sample Quantity	<b>Approx. 5.0 Litre</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.62	-	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 (Part 4)	BDL (DL 1.0)	Hazen Unit	5	15
3.	Turbidity	IS:3025 (Part-10)	BDL (DL 1.0)	NTU	1	5
4.	Odour	IS:3025 (Part-5)	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS:3025 (Part-8)	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	183.0	mg/l	200	600
7.	Calcium as Ca	IS:3025 (Part-40)	37.1	mg/l	75	200
8.	Total Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	106.0	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part-32)	104.8	mg/l	250	1000
10.	Residual Chlorine	IS:3025 (Part-26)	BDL (DL 0.20)	mg/l	0.2	1.0
11.	Cyanide	IS:3025 (Part-27) Sec 1	BDL (DL 0.02)	mg/l	0.05	No Relaxation
12.	Magnesium	IS:3025 (Part-46)	21.98	mg/l	30	100
13.	Total Dissolved Solid	IS:3025 (Part-16)	453.0	mg/l	500	2000
14.	Sulphate as SO <sub>4</sub>	APHA 24th Edition, 4500-SO <sub>4</sub> - E	29.7	mg/l	200	400
15.	Fluoride as F	APHA 24th Edition, 4500-F- D	0.55	mg/l	1	1.5
16.	Nitrate Nitrogen (as NO <sub>3</sub> )	IS:3025 (Part-34) sec 1: Para 6.3, Cadmium reduction method	6.43	mg/l	45	No Relaxation
17.	Iron	IS:3025 (Part-53)	0.08	mg/l	1	No Relaxation
18.	Aluminium	IS:3025 (Part-55)	BDL (DL 0.03)	mg/l	0.03	0.2
19.	Boron as B	IS:3025 (Part-57)	BDL (DL 0.20)	mg/l	0.5	2.4

Page 1 of 3

*Srishti*  
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## TEST REPORT

Sample Number

JME/KLM/W/01

Report No

JME/W/260113228

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
20.	Phenols	APHA 24th Edition 5540-Phenols-D, Direct Photometric	BDL (DL 0.001)	mg/l	0.001	0.002
21.	Anionic Surfactant	APHA 24th Edition, 5540 C	BDL (DL 0.02)	mg/l	0.2	1
22.	Hexa Chromium as Cr+6	IS:3025 (Part-52)	BDL (DL 0.03)	mg/l	--	--
23.	Zinc	IS:3025 (Part-49)	BDL (DL 0.1)	mg/l	5	15
24.	Copper	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l	0.05	1.5
25.	Manganese	IS:3025 (Part-59)	BDL (DL 0.08)	mg/l	0.1	0.3
26.	Cadmium	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l	0.003	No Relaxation
27.	Lead	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l	0.01	No Relaxation
28.	Selenium	IS:3025 (Part-56)	BDL (DL 0.005)	mg/l	0.01	No Relaxation
29.	Arsenic	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l	0.01	No Relaxation
30.	Mercury	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l	0.001	No Relaxation
31.	Sulphide	IS 3025 (Part 29) Para 6 Iodometric Method	BDL (DL 0.05)	mg/l	0.05	No Relaxation
32.	Ammonical Nitrogen	IS 3025 (Part 34) sec 1	BDL (DL 0.1)	mg/l	0.5	No Relaxation
33.	Chloramines	APHA 24th Edition 4500-CI-G	BDL (DL 0.01)	mg/l	4.0	No Relaxation
34.	Total Chromium	IS 3025 (Part 52)	BDL (DL 0.002)	mg/l	0.05	No Relaxation
35.	Barium	APHA ,24th Edition 3500 -Ba	BDL (DL 0.01)	mg/l	0.7	No Relaxation
36.	Silver	APHA, 24th, edition 3111 B-C	BDL (DL 0.05)	mg/l	0.1	No Relaxation

Note: BDL- Below Detection Limit, DL- Detection Limit

Page 2 of 3

*Srishti*  
Checked by

Srishti Mohan

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Rajkumar Yadav

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TC-6821

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## TEST REPORT

Sample Number	<b>JME/KLM/W/01</b>	Report No	<b>JME/W/260113228</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic water (Mines Office Tube Well Ground water)</b>	Reporting Date	<b>17/01/2026</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/01/2026</b>
Sample collected by	<b>JMELPL Team</b>	Analysis Start Date:	<b>13/01/2026</b>
Latitude	<b>24.697583 N</b>	Receipt Date	<b>13/01/2026</b>
Longitude	<b>74.619197 E</b>	Sampling Date	<b>12/01/2026</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 17°C, Cloudy Sky</b>
		Sample Quantity	<b>Approx. 250 ml</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012
1.	<i>E. coli</i>	IS 15185	Absent	per 100ml	Shall not be detectable in any 100 ml sample
2.	Total Coliform	IS 15185	Absent	per 100ml	Shall not be detectable in any 100 ml sample

Page 3 of 3

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Vineet KumarReviewed & Authorized by  
Abhijit Pathak**Note:**

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Reg. Office &amp; Lab. : 424, Ground Floor, Udyog Vihar Phase-IV, Gurugram, Haryana, India

E-mail: jmenvirolab@hotmail.com www.jmenvirolab.com



30 years of success

## TEST REPORT

Sample Number	<b>JME/KLM/W/02</b>	Report No	<b>JME/W/260113229</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic water (Hand pump Near village Charliya Ground water)</b>	Reporting Date	<b>17/01/2026</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/01/2026</b>
Sample collected by	<b>JMELPL Team</b>	Analysis Start Date:	<b>13/01/2026</b>
Latitude	<b>24.702892 N</b>	Receipt Date	<b>13/01/2026</b>
Longitude	<b>74.623352 E</b>	Sampling Date	<b>12/01/2026</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 17.5°C, Cloudy Sky</b>
		Sample Quantity	<b>Approx. 5.0 Litre</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.55	-	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 (Part 4)	BDL (DL 1.0)	Hazen Unit	5	15
3.	Turbidity	IS:3025 (Part-10)	BDL (DL 1.0)	NTU	1	5
4.	Odour	IS:3025 (Part-5)	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS:3025 (Part-8)	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	428.0	mg/l	200	600
7.	Calcium as Ca	IS:3025 (Part-40)	116.0	mg/l	75	200
8.	Total Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	213.0	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part-32)	128.1	mg/l	250	1000
10.	Residual Chlorine	IS:3025 (Part-26)	BDL (DL 0.20)	mg/l	0.2	1.0
11.	Cyanide	IS:3025 (Part-27) Sec 1	BDL (DL 0.02)	mg/l	0.05	No Relaxation
12.	Magnesium	IS:3025 (Part-46)	33.67	mg/l	30	100
13.	Total Dissolved Solid	IS:3025 (Part-16)	587.0	mg/l	500	2000
14.	Sulphate as SO <sub>4</sub>	APHA 24th Edition, 4500-SO <sub>4</sub> - E	34.8	mg/l	200	400
15.	Fluoride as F	APHA 24th Edition, 4500-F- D	0.52	mg/l	1	1.5
16.	Nitrate Nitrogen (as NO <sub>3</sub> )	IS:3025 (Part-34) sec 1: Para 6.3, Cadmium reduction method	9.16	mg/l	45	No Relaxation
17.	Iron	IS:3025 (Part-53)	0.14	mg/l	1	No Relaxation
18.	Aluminium	IS:3025 (Part-55)	BDL (DL 0.03)	mg/l	0.03	0.2
19.	Boron as B	IS:3025 (Part-57)	BDL (DL 0.20)	mg/l	0.5	2.4

Page 1 of 3

*Srishti*  
Checked by  
Srishti Mehta

Reviewed & Authorized by  
*Rajkumar*  
Rajkumar Yadav

**Note:**

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TC-6821

CIN No. :U74220HR2011PTC085756

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## TEST REPORT

Sample Number

JME/KLM/W/02

Report No

JME/W/260113229

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012	
					Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source
20.	Phenols	APHA 24th Edition 5540-Phenols-D, Direct Photometric	BDL (DL 0.001)	mg/l	0.001	0.002
21.	Anionic Surfactant	APHA 24th Edition, 5540 C	BDL (DL 0.02)	mg/l	0.2	1
22.	Hexa Chromium as Cr+6	IS:3025 (Part-52)	BDL (DL 0.03)	mg/l	--	--
23.	Zinc	IS:3025 (Part-49)	BDL (DL 0.1)	mg/l	5	15
24.	Copper	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l	0.05	1.5
25.	Manganese	IS:3025 (Part-59)	BDL (DL 0.08)	mg/l	0.1	0.3
26.	Cadmium	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l	0.003	No Relaxation
27.	Lead	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l	0.01	No Relaxation
28.	Selenium	IS:3025 (Part-56)	BDL (DL 0.005)	mg/l	0.01	No Relaxation
29.	Arsenic	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l	0.01	No Relaxation
30.	Mercury	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l	0.001	No Relaxation
31.	Sulphide	IS 3025 (Part 29) Para 6 Iodometric Method	BDL (DL 0.05)	mg/l	0.05	No Relaxation
32.	Ammonical Nitrogen	IS 3025 (Part 34) sec 1	BDL (DL 0.1)	mg/l	0.5	No Relaxation
33.	Chloramines	APHA 24th Edition 4500-CI-G	BDL (DL 0.01)	mg/l	4.0	No Relaxation
34.	Total Chromium	IS 3025 (Part 52)	BDL (DL 0.002)	mg/l	0.05	No Relaxation
35.	Barium	APHA, 24th Edition 3500 -Ba	BDL (DL 0.01)	mg/l	0.7	No Relaxation
36.	Silver	APHA, 24th, edition 3111 B-C	BDL (DL 0.05)	mg/l	0.1	No Relaxation

Note: BDL- Below Detection Limit, DL- Detection Limit

Page 2 of 3

Srishti  
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Srishti Mehta



Reviewed & Authorized by  
Rajkumar Yadav

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TC-6821

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## TEST REPORT

Sample Number	<b>JME/KLM/W/02</b>	Report No	<b>JME/W/260113229</b>
Name & Address of Unit	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Raiasthan (INDIA)</b>	Format No.	<b>7.8 F-01</b>
Sample Description	<b>Ground Water</b>	Party Reference No.	<b>Nil</b>
Sampling Location	<b>Portable &amp; Domestic water (Hand pump Near village Charliya Ground water)</b>	Reporting Date	<b>17/01/2026</b>
Client Representative (Name & Designation)	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Completion Date:	<b>17/01/2026</b>
Sample collected by	<b>JMELPL Team</b>	Analysis Start Date:	<b>13/01/2026</b>
Latitude	<b>24.702892 N</b>	Receipt Date	<b>13/01/2026</b>
Longitude	<b>74.623352 E</b>	Sampling Date	<b>12/01/2026</b>
Packing status:	<b>Temporary sealed</b>	Sampling Type	<b>Grab</b>
Sampling Protocol	<b>JMELPL/STOP/04</b>	Preservation	<b>Refrigerated</b>
		Environmental Condition during Sampling	<b>Ambient Temp. 17.5°C, Cloudy Sky</b>
		Sample Quantity	<b>Approx. 250 ml</b>
		Parameter Required	<b>As per work order</b>

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	Specification as per IS 10500-2012
1.	<i>E. coli</i>	IS 15185	Absent	per 100ml	Shall not be detectable in any 100 ml sample
2.	Total Coliform	IS 15185	Absent	per 100ml	Shall not be detectable in any 100 ml sample

Page 3 of 3

  
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Vineet Kumar

  
Reviewed & Authorized by  
Abhijit Pathak

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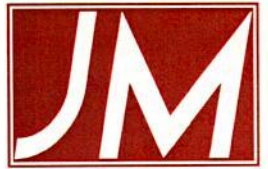
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## TEST REPORT

Sample Number:	JME/KLM/SW/01	Report No.:	JME/SW/260113041
Name & Address of Unit:	Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)	Format No.:	7.8 F-01
Sample Description:	Surface Water	Party Reference:	Nil
Sample Location:	Portable & Domestic water- (Karunda Mine-Pit water Surface Water)	Reporting Date:	17/01/2026
Client Representative (Name & Designation):	Mr. Chandrakant Tiwari (Sr. Manager)	Analysis Completion Date:	17/01/2026
Sample collected by	JMELPL Team	Analysis Start Date:	13/01/2026
Latitude :	24.697772 N	Receipt Date:	13/01/2026
Longitude :	74.618393 E	Sampling Date:	12/01/2026
Sampling Protocol:	JMELPL/STOP/04	Sampling Type	Grab
		Preservation	Refrigerated
		Environmental Condition during Sampling	Ambient Temp. 18°C; Cloudy Sky
		Sample Quantity	Approx. 5.0 Litre
		Parameter Required	As per work order

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	IS:3025 (Part-11)	7.58	-
2.	Colour	IS:3025 (Part 4)	BDL (DL 1.0)	Hazen Unit
3.	Odour	IS:3025 (Part-5)	Agreeable	-
4.	Conductivity	APHA 24th Edition, 2510B	601.0	µS/cm
5.	Turbidity	IS:3025 (Part-10)	BDL (DL 1.0)	NTU
6.	Total Hardness as CaCO <sub>3</sub>	IS:3025 (Part-21)	281.0	mg/l
7.	Calcium as Ca	IS:3025 (Part-40)	82.4	mg/l
8.	Magnesium as Mg	IS:3025 (Part-46)	18.33	mg/l
9.	Chloride as Cl	IS:3025 (Part-32)	57.16	mg/l
10.	Total Alkalinity as CaCO <sub>3</sub>	IS:3025 (Part-23)	174.0	mg/l
11.	Residual Chlorine	IS:3025 (Part-26)	BDL (DL 0.2)	mg/l
12.	Cyanide	IS:3025 (Part-27) sec 1	BDL (DL 0.02)	mg/l
13.	Dissolved Oxygen	IS:3025 (Part-38)	6.8	mg/l
14.	Chemical Oxygen Demand (COD)	IS:3025 (Part-58)	BDL (DL 5.0)	mg/l
15.	Biochemical Oxygen Demand (BOD)	IS:3025 (Part-44)	BDL (DL 1.0)	mg/l
16.	Total Dissolved Solid	IS:3025 (Part-16)	403.0	mg/l
17.	Total Suspended Solid	IS:3025 (Part-17)	BDL (DL 1.0)	mg/l
18.	Sodium	IS:3025 (Part-45)	57.0	mg/l
19.	Potassium	IS:3025 (Part-45)	8.0	mg/l
20.	Sulphate as SO <sub>4</sub>	APHA 24th Edition, 4500-SO <sub>4</sub> - E	25.81	mg/l
21.	Fluoride as F	APHA 24th Edition, 4500-F- D	0.54	mg/l
22.	Nitrogen Nitrate (as NO <sub>3</sub> )	IS:3025 (Part-34) sec 1: Para 6.3, Cadmium Reduction Method	2.92	mg/l
23.	Iron	IS:3025 (Part-53)	0.08	mg/l

Page 1 of 2

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Srishti Mehta

Reviewed & Authorized by  
Raj Kumar Yadav

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TC-6821

CIN No. :U74220HR2011PTC085756

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## TEST REPORT

Sample Number: **JME/KLM/SW/01**Report No.: **JME/SW/260113041**

S. No.	Test Parameter	Test Method	Result	Unit
24.	Phosphate	APHA 24th Edition, 4500-P-C/D	BDL (DL 0.02)	mg/l
25.	Phenols	APHA 24th Edition 5540-Phenols-D, Direct Photometric	BDL (DL 0.001)	mg/l
26.	Hexa Chromium as Cr6+	IS:3025 (Part-52)	BDL (DL 0.03)	mg/l
27.	Boron as B	IS:3025 (Part-57)	BDL (DL 0.2)	mg/l
28.	Aluminium	IS:3025 (Part-55)	BDL (DL 0.03)	mg/l
29.	Anionic Surfactant	APHA 24th Edition, 5540 C	BDL (DL 0.02)	mg/l
30.	Arsenic	IS:3025 (Part-37)	BDL (DL 0.002)	mg/l
31.	Mercury	IS:3025 (Part-48)	BDL (DL 0.001)	mg/l
32.	Selenium	IS:3025 (Part-56)	BDL (DL 0.005)	mg/l
33.	Cadmium	IS:3025 (Part-41)	BDL (DL 0.002)	mg/l
34.	Lead	IS:3025 (Part-47)	BDL (DL 0.008)	mg/l
35.	Nickel	IS:3025 (Part-54)	BDL (DL 0.005)	mg/l
36.	Zinc	IS:3025 (Part-49)	BDL (DL 0.1)	mg/l
37.	Manganese	IS:3025 (Part-59)	BDL (DL 0.08)	mg/l
38.	Copper	IS:3025 (Part-42)	BDL (DL 0.02)	mg/l

Note: BDL – Below Detection Limit, DL - Detection Limit

Page 2 of 2

*Srishti*  
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**Date/Time** Vert at 13:40:12 February 10, 2026  
**Trigger Source** Geo: 0.500 mm/s  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec at 2048 sps  
**Operator/Setup:** Operator/kdm RAJESH.mmb

**Serial Number** UM19523 V 10-90FB Micromate ISEE  
**Battery Level** 3.6 Volts  
**Unit Calibration** July 12, 2025 by UES New Delhi  
**File Name** UM19523\_20260210134012.IDFW

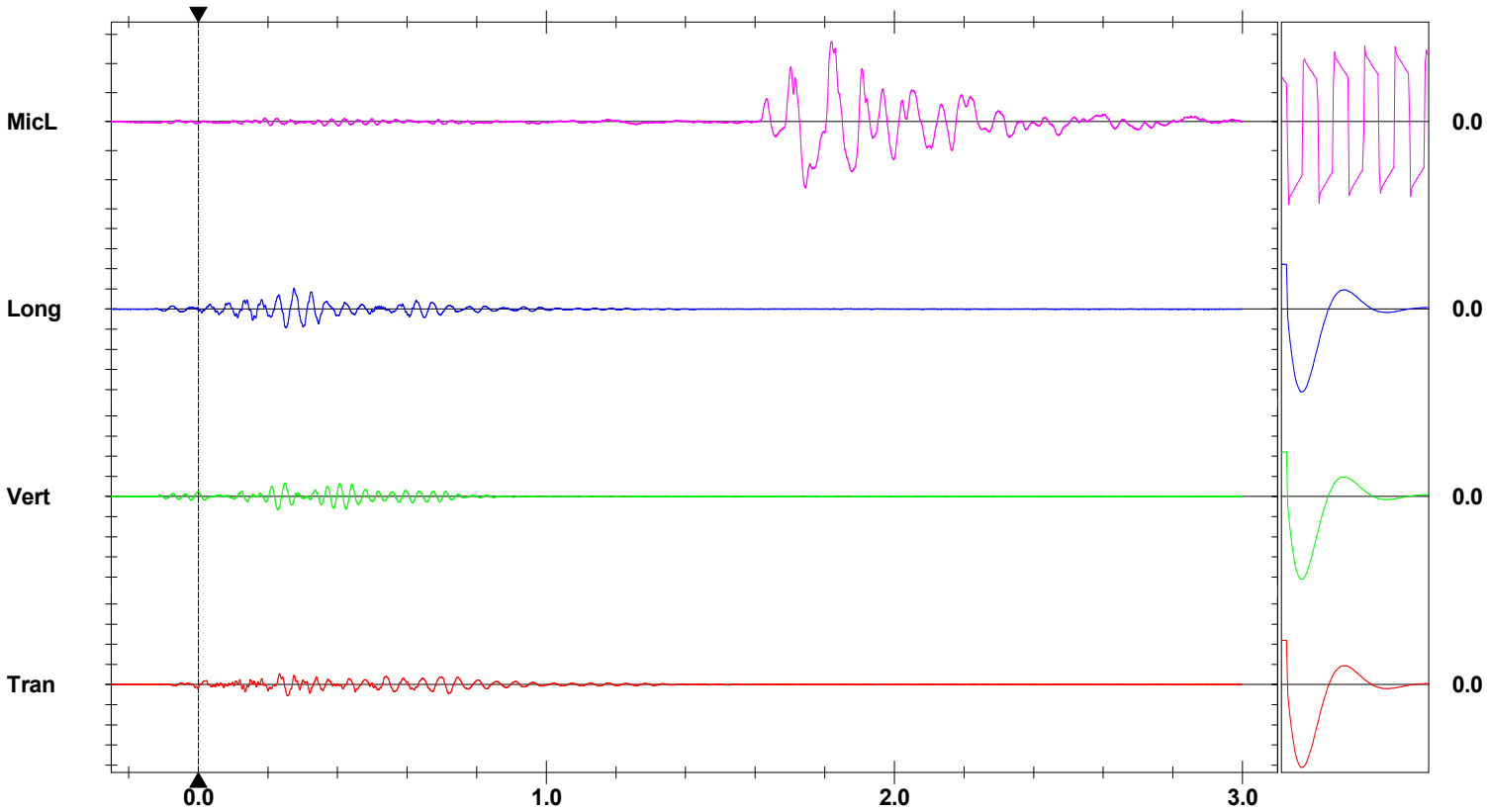
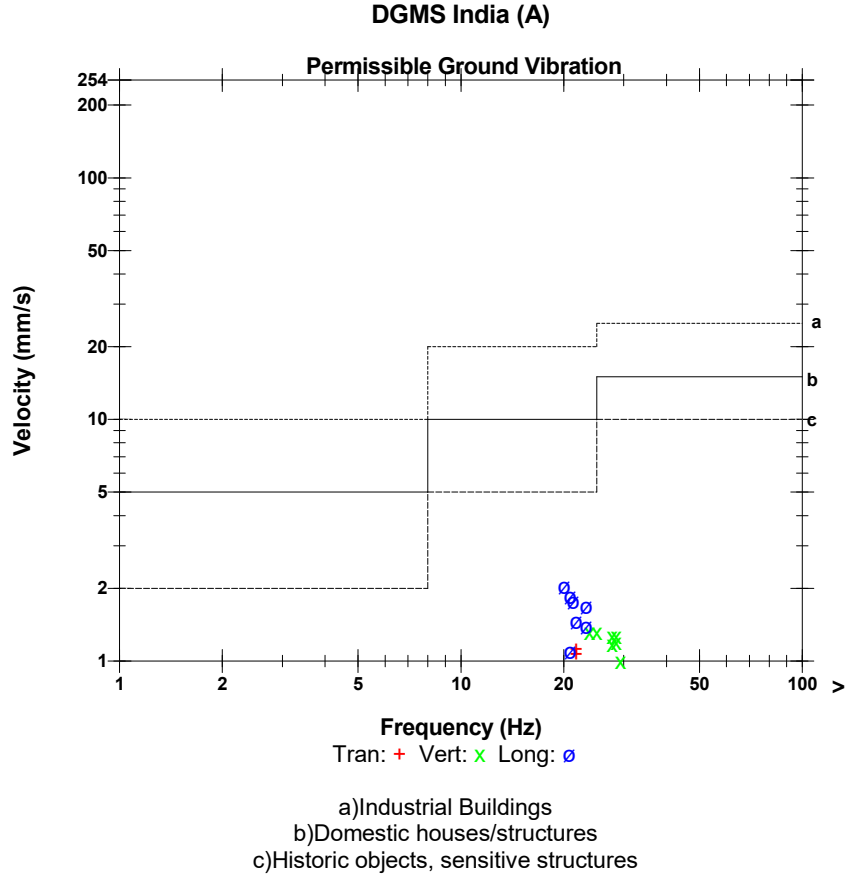
**Notes**  
 Location: KARUNDA LIMESTONE MINE  
 Client: JK CEMENT WORKS, NIMBAHERA  
 User Name: JK CEMENT WORKS, NIMBAHERA  
 General: LIMESTONE MINE

**Post Event Notes**  
 Bench=V-E, Face=E-W,B. Id= 9--73  
 No. of holes=23,Ch./Delay=39.17 kg.  
 Vibration monitor 300 m WESTside of blasting face towards pipliya village

**Microphone** Linear Weighting  
**PSPL** 5.492 pa.(L) at 1.819 sec  
**ZC Freq** 10.8 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1156 mv )

	Tran	Vert	Long	
PPV	1.127	1.324	2.049	mm/s
ZC Freq	22	25	20	Hz
Time (Rel. to Trig)	0.257	0.229	0.275	sec
Peak Acceleration	0.031	0.030	0.044	g
Peak Displacement	0.008	0.008	0.015	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.5	Hz
Overswing Ratio	4.4	4.3	4.4	

**Peak Vector Sum** 2.285 mm/s at 0.251 sec





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## TEST REPORT

Sample Number: **JME/JKCW/A/15**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117001**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Near Mine Office (Karunda Mine)**

Latitude

**24.69753889**

Longitude

**74.61920833**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/01**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Clear Sky**

Date of Monitoring

**12/11/2025 to 13/11/2025**

Time of Monitoring

**08:40 to 08:57 Hrs.**

Duration of Monitoring, (minutes)

**1456.0**

Ambient Temperature (°C)

**Max 30°C, Min 20°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	13.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

Page 1 of 2

Checked by  
  
 Deenak Singh Yadav

Reviewed & Authorized by  
  
 Sita Ram Yadav

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#### Reg. Office & Lab.

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 Phase-IV, Gurugram-122015 (Haryana)  
 E-mail: jmenvirolab@hotmail.com | www.jmenvironet.org

#### Corporate Office

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 Ext. Road, Sector-61, Gurugram-122011(Haryana)



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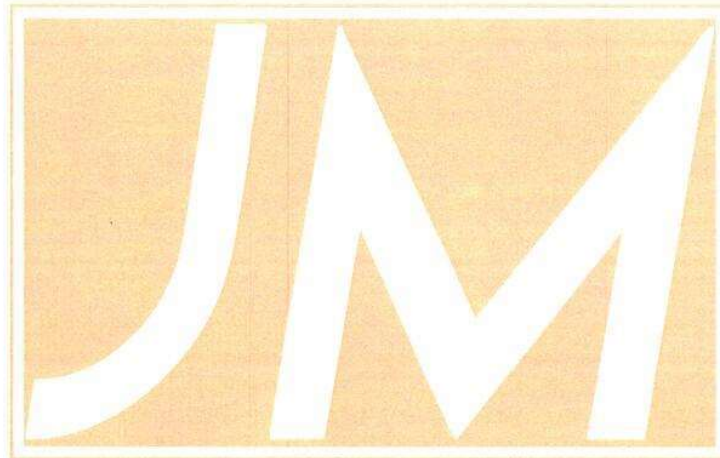
## TEST REPORT

Sample Number: **JME/JKCW/A/15**

Report No.: **JME/A/251117001**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	15.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	11.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	63.7	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	30.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	8.6	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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 Deepak Singh Yadav

  
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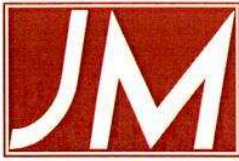
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**\*\*End of Report\*\***



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## TEST REPORT

Sample Number: **JME/JKCW/A/16**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117002**  
 Format No.: **7.5 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**  
**JMELPL Team**  
**Near Ravana Office (Karunda Mine)**  
**24.69714167**  
**74.61882222**  
**RDS, FPS & BS**  
**JME/RDS/02/08, JME/FPS/01/34 & JME/BS/01/02**  
**Calibrated**  
**Regulatory Requirement**  
**Clear Sky**  
**12/11/2025 to 13/11/2025**  
**09:10 to 09:22 Hrs.**  
**1452.0**  
**Max 30°C, Min 20°C**  
**Vehicular Activities & Mine Operations**  
**--**  
**JMELPL/STOP/04**  
**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	14.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

Page 1 of 2



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**Sita Ram Yadav**

Checked by  
**Deepak Singh Yadav**

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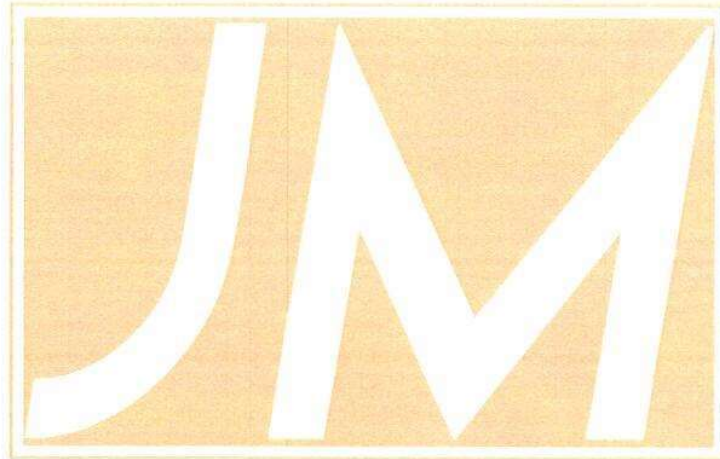
## TEST REPORT

Sample Number: **JME/JKCW/A/16**

Report No.: **JME/A/251117002**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	16.8	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	14.3	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	66.9	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	31.7	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	6.5	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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\*\*End of Report\*\*



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## TEST REPORT

Sample Number: **JME/JKCWA/17**  
 Name & Address of Unit: **Karunda Limestone Mine,  
 ML No. 03/2003, M/s J.K. Cement Works  
 Nimbahera, Tehsil - Nimbahera, District -  
 Chittorgarh, State- Rajasthan (INDIA)**

Report No.: **JME/A/251117003**  
 Format No.: **7.8 F-02**  
 Party Reference No.: **Nil**  
 Reporting Date: **20/11/2025**  
 Analysis Completion Date: **20/11/2025**  
 Analysis Start Date: **17/11/2025**  
 Receipt Date: **17/11/2025**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)  
 Sample collected by  
 Sampling Location  
 Latitude  
 Longitude  
 Instrument used  
 Instrument code  
 Instrument Calibration Status  
 Scope of Monitoring  
 Meteorological condition during monitoring  
 Date of Monitoring  
 Time of Monitoring  
 Duration of Monitoring, (minutes)  
 Ambient Temperature (°C)  
 Surrounding activity  
 Control measure if Any  
 Sampling Protocol  
 Parameter Required

**Mr. Chandrakant Tiwari (Sr. Manager)**

**JMELPL Team**

**Charlia Gadia village (Karunda)**

**24.70433889**

**74.62389444**

**RDS, FPS & BS**

**JME/RDS/01/29, JME/FPS/01/07 & JME/BS/01/04**

**Calibrated**

**Regulatory Requirement**

**Clear Sky**

**12/11/2025 to 13/11/2025**

**09:30 to 09:35 Hrs.**

**1445.0**

**Max 30°C, Min 20°C**

**Vehicular Activities & Mine Operations**

**--**

**JMELPL/STOP/04**

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	17.2	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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#### Note:

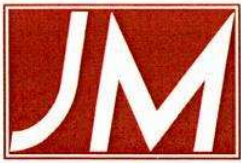
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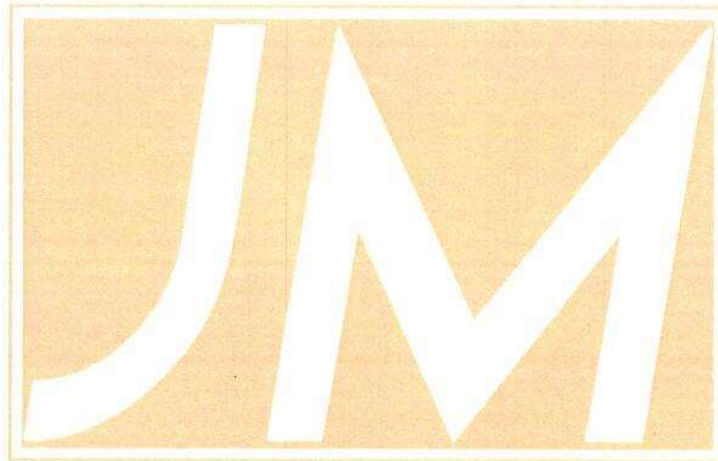
## TEST REPORT

Sample Number: **JME/JKCW/A/17**

Report No.: **JME/A/251117003**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	10.6	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	8.9	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	58.3	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	27.4	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	3.8	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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\*\*End of Report\*\*



## TEST REPORT

Sample Number:	<b>JME/JKCW/A/18</b>	Report No.:	<b>JME/A/251117004</b>
Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Format No.:	<b>7.8 F-02</b>
		Party Reference No.:	<b>Nil</b>
		Reporting Date:	<b>20/11/2025</b>
		Analysis Completion Date:	<b>20/11/2025</b>
		Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Client Representative (Name & Designation)

**Mr. Chandrakant Tiwari (Sr. Manager)**

Sample collected by

**JMELPL Team**

Sampling Location

**Karunda village**

Latitude

**24.69724722**

Longitude

**74.60743056**

Instrument used

**RDS, FPS & BS**

Instrument code

**JME/RDS/02/03, JME/FPS/01/14 & JME/BS/01/07**

Instrument Calibration Status

**Calibrated**

Scope of Monitoring

**Regulatory Requirement**

Meteorological condition during monitoring

**Clear Sky**

Date of Monitoring

**12/11/2025 to 13/11/2025**

Time of Monitoring

**10:05 to 10:20 Hrs.**

Duration of Monitoring, (minutes)

**1455.0**

Ambient Temperature (°C)

**Max 30°C, Min 20°C**

Surrounding activity

**Vehicular Activities & Mine Operations**

Control measure if Any

**--**

Sampling Protocol

**JMELPL/STOP/04**

Parameter Required

**As per work order**

### TEST RESULTS

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
1.	Ammonia	IS: 5182, (Part-25)	18.6	µg/m <sup>3</sup>	400 (24 hourly)
2.	Arsenic	JMELPL/STOP/03	BDL (DL 0.5)	ng/m <sup>3</sup>	6 (Annual)
3.	Benzene	IS:5182, (Part-11)	BDL (DL 1.0)	µg/m <sup>3</sup>	5 (Annual)
4.	Benzo (a) Pyrene	IS:5182, (Part-12)	BDL (DL 0.5)	ng/m <sup>3</sup>	1 (Annual)
5.	Carbon Monoxide	IS: 5182, (Part-10)	BDL (DL 0.5)	mg/m <sup>3</sup>	4 (1 hourly)
6.	Lead	IS: 5182, (Part-22)	BDL (DL 0.02)	µg/m <sup>3</sup>	1 (24 hourly)
7.	Nickel	IS: 5182, (Part-26)	BDL (DL 1.0)	ng/m <sup>3</sup>	20 (Annual)

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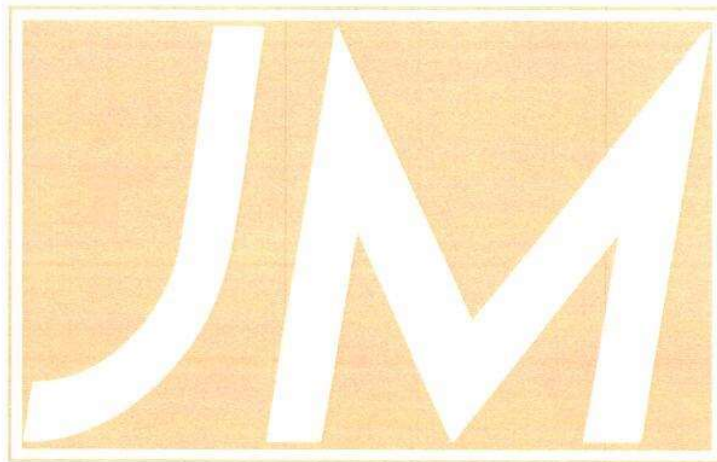
## TEST REPORT

Sample Number: **JME/JKCW/A/18**

Report No.: **JME/A/251117004**

S. No.	Test Parameter	Test Method	Result	Unit	NAAQS
8.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182, (Part-6)	11.7	µg/m <sup>3</sup>	80 (24 hourly)
9.	Ozone	IS: 5182, (Part-9)	10.1	µg/m <sup>3</sup>	180 (1 hourly)
10.	PM <sub>10</sub>	IS:5182, (Part-23)	62.4	µg/m <sup>3</sup>	100 (24 hourly)
11.	PM <sub>2.5</sub>	IS:5182, (Part-24)	29.5	µg/m <sup>3</sup>	60 (24 hourly)
12.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182, (Part-2) Sec 1	5.2	µg/m <sup>3</sup>	80 (24 hourly)

Note: NAAQS-National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)] [Part-II sec.-3(i)] 18.11.2009



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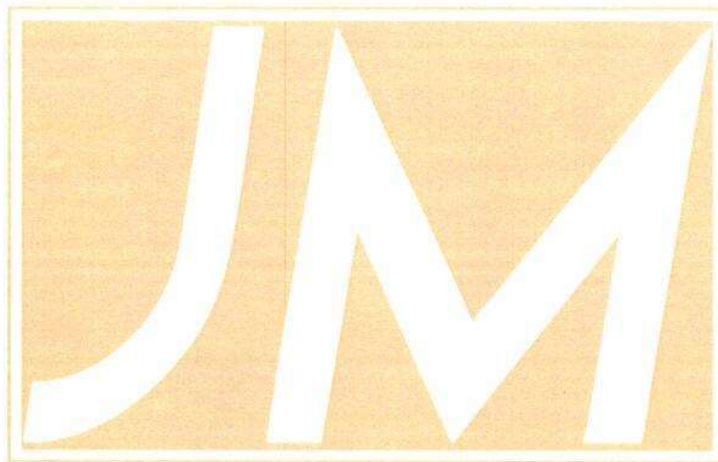
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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/251117001</b>
Sample Description:	<b>FUGITIVE EMISSION</b>	Reporting Date:	<b>20/11/2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>20/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>JMELPL/STOP/03</b>

### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO (mg/m <sup>3</sup> )
1.	3-10-meter distance from drilling point of Karunda Mines	13/11/2025	352.0	5.8	11.5	0.52
Limit as per CTO			600	-	-	-



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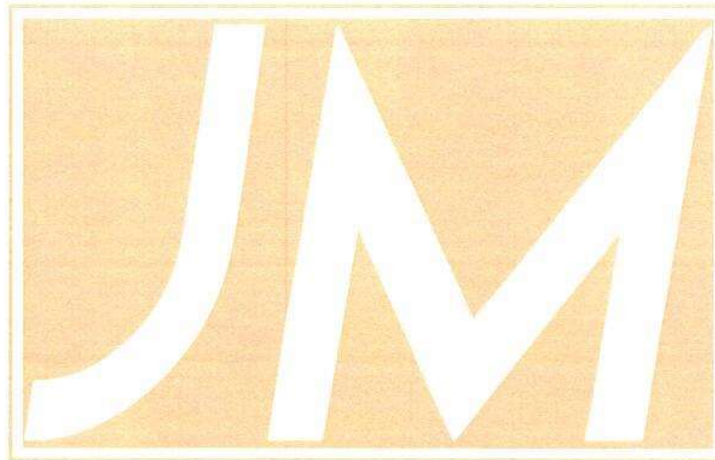
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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/FD/251117002</b>
Sample Description:	<b>FUGITIVE DUST EMISSION</b>	Reporting Date:	<b>20/11/2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Analysis Completion Date:	<b>20/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Analysis Start Date:	<b>17/11/2025</b>
		Receipt Date:	<b>17/11/2025</b>
		Duration of Sampling:	<b>4 hours</b>
		Equipment Used:	<b>HVS</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>JMELPL/STOP/03</b>

### TEST RESULTS

S. No.	Sampling Location	Date of Monitoring	SPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )
1.	Near Loading point of Karunda Mine	13/11/2025	354.0	5.3	10.4	0.57
Limit as per CTO			600	-	-	-



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\*\*End of Report\*\*



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## TEST REPORT

Name & Address of Unit:	<b>Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)</b>	Report No.:	<b>JME/AN/251117001-002</b>
Sample Description:	<b>AMBIENT NOISE LEVEL MONITORING</b>	Reporting Date:	<b>20/11//2025</b>
Sample Collected by:	<b>JMELPL TEAM</b>	Receipt Date:	<b>17/11/2025</b>
Client Representative:	<b>Mr. Chandrakant Tiwari (Sr. Manager)</b>	Equipment Used:	<b>Sound Level Meter</b>
		Duration of Monitoring:	<b>24 Hours</b>
		Sampling Protocol:	<b>JMELPL/STOP/04</b>
		Test Method:	<b>IS 9989</b>

### TEST RESULTS

Monitoring Locations	Date of Monitoring	Day Time (06:00 AM to 10:00 PM)			Night Time (10:00 PM to 06:00 AM)		
		Min.	Max.	Leq in dB(A)	Min.	Max.	Leq in dB(A)
Near Mine Office, Karunda Mine	13/11//2025	54.6	65.9	62.3	44.2	61.8	47.1
Near Ravana Office, Karunda Mine	13/11//2025	50.4	62.5	59.7	43.8	58.4	46.5

### CPCB NOISE STANDARDS

Category of Zones	Leq in dB(A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

1. Day Time is from 06.00 AM to 10.00 PM.  
 2. Night Time is reckoned between 10.00 PM to 06.00 AM  
 3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.  
**Note:** Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

Page 1 of 1

Checked by  
Deepak Singh Yadav

Reviewed & Authorized by  
Sita Ram Yadav

**Note:**

1. This test report pertains solely to the tested sample as received.
2. This report shall not be reproduced without in full.
3. Any discrepancies in this test report must be brought to our attention within 7 days from the date of issue.
4. The sample will be destroyed after the specified retention period unless prior instructions are received.
5. All disputes are subject to the exclusive jurisdiction of Gurugram only.

**Reg. Office & Lab.**

424, Ground Floor, Udyog Vihar,  
Phase-IV, Gurugram-122015 (Haryana)  
E-mail: [jmenvirolab@hotmail.com](mailto:jmenvirolab@hotmail.com) | [www.jmenvirolab.com](http://www.jmenvirolab.com)

**Corporate Office**

Emaar Digital Greens, Tower-B, Unit No.1517, Golf Course  
Ext. Road, Sector-61, Gurugram-122011(Haryana)

\*\*End of Report\*\*

# J.M. ENVIROLAB PVT. LTD.

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Reg. Office &amp; Lab. : 424, Ground Floor, Udyog Vihar Phase-IV, Gurugram, Haryana, India

E-mail: jmenvirolab@hotmail.com www.jmenvirolab.com



30 years of success

## TEST REPORT

Name & Address of Unit: **Karunda Limestone Mine, ML No. 03/2003, M/s J.K. Cement Works Nimbahera, Tehsil - Nimbahera, District - Chittorgarh, State- Rajasthan (INDIA)** Report No.: **JME/AN/260213001-002**

Reporting Date: **17/02/2026**

Receipt Date: **13/02/2026**

Equipment Used: **Sound Level Meter**

Sample Description: **AMBIENT NOISE LEVEL MONITORING** Duration of Monitoring: **24 Hours**

Sample Collected by: **JMELPL TEAM** Sampling & Testing Protocol: **IS-9989**

Client Representative: **Mr. Chandrakant Tiwari (Sr. Manager)**

### TEST RESULTS

Monitoring Locations	Date of Monitoring	Day Time (06:00 AM to 10:00 PM)			Night Time (10:00 PM to 06:00 AM)		
		Min.	Max.	Leq in dB(A)	Min.	Max.	Leq in dB(A)
Near Mine Office, Karunda Mine	11/02//2026 to 12/02/2026	46.3	68.5	55.9	40.8	60.9	45.1
Near Ravana Office, Karunda Mine	11/02//2026 to 12/02/2026	44.8	65.6	54.1	39.1	57.5	42.7

### CPCB NOISE STANDARDS

Category of Zones	Leq in dB(A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

1. Day Time is from 06.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 06.00 AM  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

**Note:** Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

Page 1 of 1

  
Checked by  
Deepak Singh Yadav

  
Reviewed & Authorized by  
Sita Ram Yadav

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\*\*End of Report\*\*

**FORM - O**

(See rule 29F (2) and 29L)

**Report of Medical Examination under rule 29 B**

(To be issued in triplicate \*\*)

Certificate No.....

Certified that Shri **Devi Singh Rajput S/o Shri...Kalu Singh Rajput...** Employed as **Driver (Shree Bherunath Goods Carrier)** at **Amalgamated Karunda Malia Khera Lime Stone Mines** Form A **240**  
No - has been examined for an **initial / periodical** medical examination. He appears to be **28** years of age.

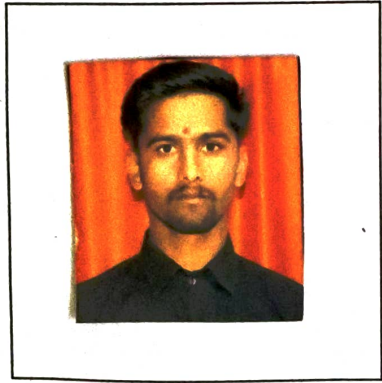
The findings of the examining authority are given in the attached sheet. It is considered that -

**Devi Singh Rajput S/o Shri...Kalu Singh Rajput**

- ( a ) \* is medically fit for any employment in mines, ✓
- ( b ) \* is suffering from .....and is medically unfit for - ✗
  - ( i ) any employment in mine ; or
  - ( ii ) any employment below ground ; or
  - ( iii ) any employment or work .....

( c ) \* is suffering from .....should get this disability cured / controlled \* and should be again examined ✗  
within a period of .....months. He will appear for re- examination with the result of test of ..... and  
the opinion of .....

Specialist from ..... He may be permitted / not permitted \* to carry on his duties during this period



Signature of the examining  
**P. S. CHAUDHARY**  
 C.M.O.  
 Authority, Cement Works  
 NIMBAHERA (Raj.)  
 Reg. No. 21732  
 Name and designation in  
 Block letters.

\*Delete whatever is not applicable\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post ; and the third copy shall be retained by the examining authority.

**FORM - O ( Continued )**

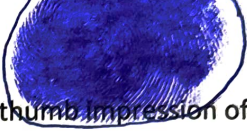
Abdomen  
(i)

8.

**Report of the examination authority**

( To be filled in for every medical examination whether initial or periodical or re- examination or after cure / control of disability )

Annexure to certificate No. \_\_\_\_\_ as a result of medical examination on \_\_\_\_\_

Identification Mark A black mole over  Left shoulder  
Left thumb impression of the candidate.

1. **General Development** Good /  Fair / Poor

2. **Height** 178 cms.

3. **Weight** 64 kg.

4. **Eyes** :-

(i) Visual acuity N Distance vision ( with or without glasses )

(ii) Any organic disease of eyes none

(iii) Night blindness NAD

(iv) Color blindness NAD

(v) Squint \_\_\_\_\_

( to be tested in special cases )

5. **Ears** :-

(i) Hearing Right ear N Left ear N

(ii) Any organic disease none

6. **Respiratory system ( Chest measurement )** :-

(i) After full inspiration 84 cms.

(ii) After full expiration 81 cms.

7. **Circulatory system** :-

(i) Blood Pressure 130/72 mmHg

(ii) Pulse 62/min

8. Abdomen :-

- (i) Tenderness----- *none*
- (ii) Liver----- *none*
- (iii) Spleen----- *NP*
- (iii) Tumor----- *not seen*

9. Nervous system :-

- (i) History of fits or epilepsy----- *no*
- (ii) Paralysis----- *no*
- (iii) Mental Health----- *fair*

10. Locomotors system-----

11. Skin-----

12. Hernia-----

13. Hydrocele-----

14. Any other abnormality----- *none*

15. Urine :-

- (i) Reaction----- *acidic*
- (ii) Albumin----- *nil*
- (iii) Sugar----- *nil*

16. Skiagram of chest. *NAD*

17. Any other test considered necessary by the examining authority. -----

18. Any opinion of specialist considered necessary-----

Signature of the examining Authority.

*S. R. CHAUDHARY*  
C.M.O.  
Jr. Genl. Works  
NIMBAHERA (Raj.)  
Reg. No. 21732

Place: - *Nimbahera*

## Report of Medical Examination under Mines Rules 29 B

(To be used in continuation of Form O)

Certificate No.: -

Name: - Devi Singh Rajput S/o Shri...Kalu Singh Rajput

Identification Marks: -

A black mole over  shoulder

Result of Lung Function Test (Spirometry)

Particulars	Predicted Value	Performed Value	% of Predicted
Forced Vital Capacity (FEV)	4.02	3.37	84
Forced Vital Capacity -1 (FEV)	3.40	3.37	99
FEV-1 / FVC	84.58	100	118
Peak Expiratory Flow	9.84	11.80	120

Spirometry report enclosed

Signature of Examination Authority

**Dr. S. K. CHAUDHARY**

C.M.O.

J. K. Colliery Works

NIMBAHERA (Raj.)

Reg. No. 21732

## Report of Medical Examination as per the recommendations of National Safety Conference in Mines

(To be used in continuation of Form O)

Certificate No.: -

Name: - Devi Singh Rajput S/o Shri...Kalu Singh Rajput .....

Identification Marks: -

A black mole over  shoulder

01. Cardio logical Assessment: -

Auscultation	S1	
	S2	
	Additional Sound	
Electrocardiographs ( 12 leads) findings		Normal / Abnormal

Enclosed ECG

02. Neurological Assessment: -

Findings	Normal / Abnormal
Superficial Reflexes	
Deep Reflexes	
Peripheral Circulation	
Vibrational Syndromes	

03. ILO Classifications of Chest Radiograph: -

Profusion of Pneumoconiosis opacities	Grade	Types
Present / Absent	-	-

Enclose Chest Radiograph

Continued: -

04. Audiometry Findings:-

Conduction Type	Left Ear	Right Ear
Air Conduction	Normal / Abnormal	Normal / Abnormal
Bone Conduction	Normal / Abnormal	Normal / Abnormal

Enclosed Audiometry Report

JKCEME

Employee Details  
Report No.  
Age

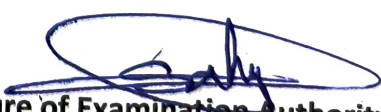
05. Pathological / Microbiological Investigations: -

Sr. No.	Tests	Findings
01.	Blood- Tlc, Dlc, Hb, ESR, Platelets	WNL / Abnormal
02.	Blood Sugar – Fasting & PP	WNL / Abnormal
03.	Lipid Profile	WNL / Abnormal
04.	Blood Urine , Creatinine	WNL / Abnormal
05.	Urine Routine	WNL / Abnormal
06.	Stool Routine	WNL / Abnormal

06. Special Test of Mnref Exposure:-

Behavioral Disturbances		Present / Not Present
Neurological Disturbance	Special Defect	Present / Not Present
	Tremor	Present / Not Present
	Adiadocokinesia	Present / Not Present
	Emotional Changes	Present / Not Present

Any other Test Required

  
Signature of Examination Authority

Dr. S. K. CHAUDHARY  
C.M.O.  
J. K. Cement Works  
NIMBAHERA (Raj.)  
Reg. No. 21732

**Land Use / Land Cover Analysis for mine and buffer zones  
of Karunda Limestone Mine,  
of J. K. Cement Works, Nimbahera (A Unit of J.K.Cement Ltd.)  
using Remote Sensing Techniques.**



**Client:**  
**J.K.Cement Works, Nimbahera**  
**(A Unit of J.K.Cement Ltd.)**

Prepared By :  
CompuSense Automation, Ahmedabad

September 2025

## Table of Contents

1. Introduction.....	2
2. Objectives.....	3
3. Study Area .....	3
Table : 1 Location and Extent.....	3
4. Data used .....	3
Table : 2 Data used .....	4
Figure : 1 Study area location map.....	4
5. General Description of the study area.....	5
5.1 Location and Extent.....	5
5.2 Physiography, Relief and Drainage.....	5
5.3 Climate .....	5
5.4 Geology .....	5
6. Land Use.....	8
7. Methodology.....	9
8. Classification system .....	11
Table : 3 Land Use / Land Cover Classification System.....	11
8.1 Built up land.....	12
8.2 Agricultural land.....	12
8.3 Forest Land.....	13
8.4 Wastelands.....	13
8.5 Water bodies.....	14
8.6 Others.....	14
Class Photographs & Satellite Images.....	15
Figure : 2 Base Map and Satellite Image of Study Area.....	19
9. Result (Statistics).....	21
9.1 Within Mine Lease Area (MLA) (Core Zone).....	21
Table : 4 Land Use/Land Cover Statistics – Core Zone.....	21
Figure : 3 Land Use / Land Cover Map Core Zone .....	23
9.2 500m Buffer Zone .....	24
Table : 5 Land Use/Land Cover Statistics – 500m Buffer Zone.....	24
Figure : 4 Landuse /Landcover Map 500m Buffer Zone.....	26
9.3 5Km Buffer Zone .....	27
Table : 6 Land Use/Land Cover Statistics – 5Km Buffer Zone.....	27
Figure : 5 Landuse / Landcover Map – 5km Buffer Zone.....	29
9.4 10Km Buffer Zone .....	30
Table : 7 Land Use/Land Cover Statistics – 10Km Buffer Zone.....	30
Figure : 6 Landuse/Landcover Map – 10km Buffer Zone.....	32
Annexure : 1 Projection Parameters.....	33
Annexure : 2 Interpretation Key.....	34

## **1. Introduction**

Present study of mapping Land Use / Land Cover using remote sensing data for Karunda Limestone Mine near Karunda village in Nimbahera tehsil of Chittorgarh district, Rajasthan is carried out on behalf of M/s J. K. Cement Works, Nimbahera (A Unit of J.K. Cement Ltd.). Now a days, it has become mandatory to carry out a Land Use / Land Cover analysis of the project site using satellite data similar to preliminary site survey. Comprehensive and chronological Land Use / Land Cover information is very vital for management of land. Accurate & precise compilation of this information helps in deciding the proper use of the land. Optimum economic use in accordance with minimal disturbance of the present ecology should be the prime objective of any industrial activity. Remote Sensing technology because of synoptic, repetitive and multi spectral characteristics becomes very vital technology for mapping Land Use / Land Cover. In addition to this, the study provides the facility of constant monitoring and past history of any particular area. Geographic Information System (GIS) is a tool, which allows the integration of spatial data with non - spatial data.

Systematic and comprehensive compilation of Land Use / Land Cover maps and data is necessary for planned development of agriculture, forest, grasslands, rural settlements, urban spread, Industries and a host of other land based programs and activities. Land Use refers to the various ways, the land is being utilized for different purposes by man mainly to generate income as well as for residential purpose. Whereas, 'Land Cover' refers to the natural surrounding present on the area under study. The existing information on Land Use / Land Cover is largely in the form of statistics based on compilation of village records. Whatever information available in the form of maps, suffers from the problems of spotty coverage, lack of consistency and a large time gap between data compilation and map publication.

In the present study, Land Use / Land Cover information of the study area i.e. within Karunda Limestone mine lease area (MLA), 500m, 5Km and 10Km buffer around the mine lease has been mapped using the digital data dated 10<sup>th</sup> January 2025 from LISS IV sensor of Resource sat-2A satellite and 03<sup>rd</sup> October 2024 of Sentinel-2 satellite. For core area, very high resolution Panchromatic data from Cartosat-3 dated 18<sup>th</sup> May 2025 with 1.12m and Cartosat2 dated 13<sup>th</sup> February 2025 satellite with 2.5 meter were used.

Data has been corrected geometrically and radiometrically. This corrected data has been used for classifying the image. Various major categories like agriculture, wasteland, water body,

forest, etc. were identified and mapped. Area statistics is calculated for different Land Use / Land Cover categories along with generating of pie charts. A thematic map is also generated depicting various classes with different symbols.

## 2. Objectives

Main objectives of this analysis are:

- To analyze Land Use / Land Cover of the study area using latest remote sensing satellite data.
- To generate statistics of Land Use / Land Cover classes and thematic map.

## 3. Study Area

The study area consists of limestone mine lease area and its buffer zones of 500m, 5Km and 10Km from periphery of mine lease. The study area falls in district of Chittorgarh in Rajasthan.

### Extents of study areas

Extents of study area as per following table.

**Table : 1 Location and Extent**

Core/ Buffer Zone	Extents		Area in Ha.	SOI Toposheet Reference
	Latitude	Longitude		
	From/To	From/To		
Within Mine Lease	24° 41' 23.1" N	74° 36' 25.1" E	<b>240.86</b>	45L/10
	24° 42' 27.8" N	74° 37' 12.7" E		
500m Buffer	24° 41' 07.0126" N	74° 36' 07.2528" E	<b>641.33</b>	45L/10
	24° 42' 43.9114" N	74° 37' 30.7373" E		
5Km Buffer	24° 38' 41.0808" N	74° 33' 26.5713" E	<b>11263.55</b>	45L/9 and 45L/10
	24° 45' 09.7673" N	74° 40' 11.2535" E		
10Km Buffer	24° 35' 58.8764" N	74° 30' 27.9140" E	<b>37974.31</b>	45L/9 and 45L/10
	24° 47' 51.7707" N	74° 43' 09.4834" E		

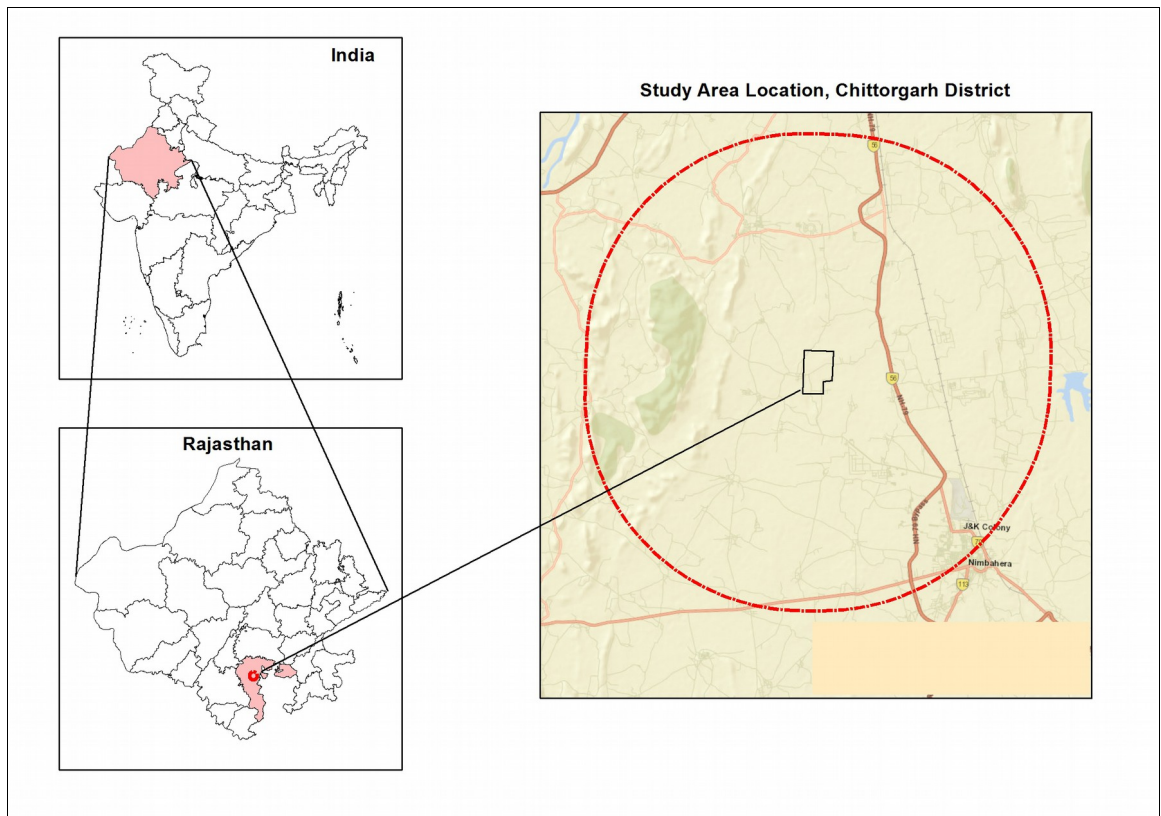
## 4. Data used

Digital remote sensing data as per details given below was procured online through National Remote Sensing Centre. The dates were selected for Kharif and Rabi seasons for deriving Land Use.

Table : 2 Data used

Satellite	Sensor	Sub scene	Path-Row	Season	Date
Resource sat-2A	L4FMX	D	94-54	Rabi	10th January, 2025
Sentinel -2	MX		511-105	Kharif	03rd Oct. 2024
Cartosat-3	MX	31323_9_17	30351	Core Area	15th May 2025
Cartosat-2	MX	39310_1_9	65881	Core Area	13th Feb. 2025

Figure : 1 Study area location map



## **5. General Description of the study area**

### **5.1 Location and Extent**

The detail of study area as defined in table 1, falls in Chittorgarh district of Rajasthan. Mine lease is located near Karunda Village. The tehsil headquarter is Nimbahera. The nearest railway station, is Mangrol about 6 Km from the mining area. Nearest airport is Dabok in Udaipur 90 Km from Nimbahera. Nearest seaport Kandla is about 618 Km from Nimbahera.

### **5.2 Physiography, Relief and Drainage**

Physiographically, the area is a part of flat plains. Topographically, the area is consisting of gently undulating plains, excepting the raising grounds trending north-easterly. Slope of area is from west to east. The Maximum elevation within Mining lease is 436 m and Minimum is 429 m. Most of the study area is covered by agricultural land with scattered limestone mines.

The area is drained by the Gambhiri river which flows in northeast of Nimbahera. Besides, there are small Nalas which contain water during the monsoon. The area is part of Banas River Basin.

### **5.3 Climate**

Climate of the area is tropical and semi humid, the total annual rainfall is 795 mm. Most of the rain in the area is received during south west monsoon. Average number of rainy days in the area varies between 64-72.

The relative humidity is 35 to 45 %. Maximum temperature of 46 °C is recorded in the month of June and minimum temperature of 5 °C is recorded in the month of December. Wind speed in this area is light to moderate. Water tables in summer stands about 382-377 meters AMSL at a depth more than 50-55 meters bgl in pre monsoon and 394 meters AMSL at a depth of 38 metres bgl in post monsoon.

### **5.4 Geology**

The limestone formations are under Nimbahera limestone belt which is equivalent to the Semri series of lower Vindhyan. The sequence of the rocks which are in this region is given below:

The geological succession of the region as per the GSI is as follows:

### Geological Sequence of the Area

Formation	Age
Alluvium	Recent
Laterite	Sub recent to pleistone
Deccan Trap	Upper cretaceous
Kaimur Sandstone	Upper vindhyan
Suket shale	Lower vindhyan
Nimbahera grey limestone	
Nimbahera purple limestone	
Nimbahera purple shale	
Khorimalan conglomeratic	Unconformity
Sandstone and boulder beds	

In Nimbahera area, a complete sequence of the vindhyan rocks is exposed. The nimbahera limestone is also exposed at Chittorgarh, Binota, Khori, Sawa and Jawad. Of the large tract of vindhyan rocks between Chittorgarh and Saugar, a major portion of the area is covered by Deccan trap. Along the southern and western margins of the area from Chittorgarh to Jhalra Patan, a great thickness of lower vindhyan rocks lies below the Kaimur sandstone.

#### **Nimbahera Shales:**

The Nimbahera shales, about 45 meters in thickness, are usually brown or purple in colour. The shales are splintery in nature and rather siliceous but are homogenous and uniform in texture. The Nimbahera shales are underlain by Khori-Malan conglomeratic sandstone.

#### **Nimbahera Limestone:**

This limestone named after its typical place of occurrence, can be continuously traced from near Jawad to Nimbahera and thereafter in patches in Chittorgarh, Binota, Khori and Sawa. The total thickness of the Nimbahera limestone is estimated to be 144 meters, of which the bottom 9 meters is deep reddish purple in colour, while the upper 135 meters is grey in color. The Nimbahera limestone is conformable with the Suket shales occurring above it and the Nimbahera shales lying below. The Nimbahera limestone is folded into narrow anticlines and synclines, with the general strike being N-S.

**Suket Shales:**

The Suket shales rest conformably on the Nimbahera limestone and are overlain by Kaimur sandstone. Suket shales are soft, fissile and occur in variegated colours such as purple, grey, buff, chocolate and bluish green. Two sets of joints are well developed trending in north-south and east-west directions.

**Deccan Trap:**

Deccan trap is noticed around Neemuch forming low lying plateaus which are covered with Lateritic debris. The trap rock is fine grained and exfoliation weathering is quite predominant due to which rounded pebbles and boulders are strewn all over the area.

**Laterite:**

The Laterite and Lateritic soils are derived from the weathering of Deccan trap.

**Alluvium:**

Generally there is a thin alluvial cover in this area. In the limestone bearing area copious outcrops are seen; however at places the limestone occurs beneath soil cover, about a meter or more thick over the Deccan trap, black cotton soil is prevalent.

**5.4.1 Local Geology**

The sequence of formation exposed in the Karunda area is as follows:

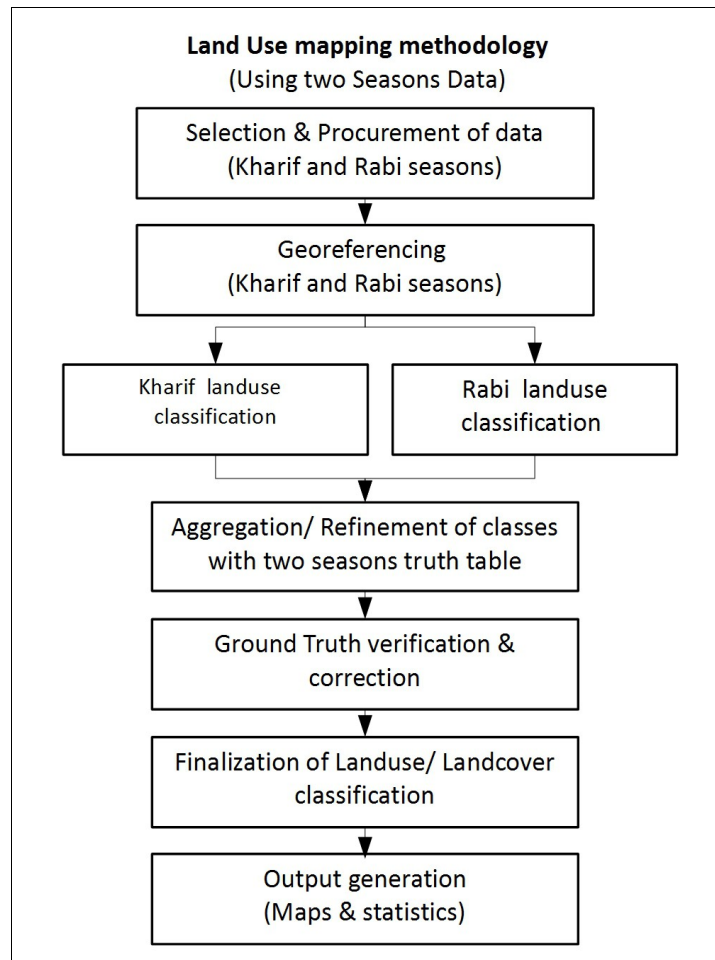
1. Purple shale
2. Dark grey limestone
3. Grey limestone
4. Light grey limestone
5. Pink limestone
6. Greenish grey limestone
7. Light grey limestone (Low grade)

## **6. Land Use**

General topography of the study area is plain with scattered hills on north western part. Soil is yellowish brown. Average rainfall is about 795 mm. Irrigation is available from two dams and tube wells. As a result, agriculture is the main economic activity of people and is the major land use class. Maize, ground nut, soybean and millet are kharif crops where as wheat, mustard and gram are rabi crops. At the same time study area falls in famous lime stone belt of Rajasthan. Hence there are about 5 cement plants and several lime stone mines in the area. Due to lime stone some out crops are seen in study area which contribute to wastelands along with hills and open scrubs. There is no perennial river in the study area but two dams, mine sumps and some village ponds are the water bodies found in this area. Gambhiri is the main river flowing through study area. Majority of land is under agricultural use due to irrigation facilities of dams, mine sumps and tube wells. Most of the area under cultivation has two crops per year.

## 7. Methodology

General methodology using Multi-temporal digital data for kharif and rabi season, to derive Land Use / Land Cover layer is shown in following diagram.



The methodology comprises the following functional component.

### **Data loading and image preparation**

Three bands of data were downloaded from raw data and stacked to form a false colour composite (FCC). This raw data was georeferenced and projected in Universal Transverse Mercator (UTM), zone 43N projection. This projection was adopted from National Spatial Framework (NSF). Parameters for this projection are given in Annexure:1. This data was radiometrically enhanced for ease of interpretation.

### **Base map features mapping**

Mapping of base map feature like roads, river, nala, water bodies and drainage were done using interpretation key in Annexure:2.

### **Digital classification of the two season data.**

Base map feature classes were interpreted visually and masked out from digital image and a subset was derived using buffer boundaries. This image was classified using supervised classification method called Maximum Likelihood classifier in QGIS software. This comprised of creating signature files by identifying different classes and executing classifier. Data of both seasons were separately classified.

### **Refinement**

Classified data of both seasons was refined using 5x5 Mode filter to remove noisy pixels.

### **Aggregation of classes**

Classified data for two seasons was aggregated using two seasons truth table.

<b>Rabi</b>	<b>Kharif</b>	<b>Integrated class</b>
Crop	Crop	Double Crop
Crop	Fallow	Rabi
Fallow	Crop	Kharif
Fallow	Fallow	Fallow

### **Ground truth verifications**

A limited ground truth was conducted on 29<sup>th</sup> August, 2025, to verify certain spectrally confusing classes found during interpretation. During the traverse, Land Use / Land Cover classes were verified for their correctness with respect to interpreted map. Local informations regarding cropping pattern etc. were also collected.

### **Finalization of map based on ground truth collection**

Based on ground truth observations classified map was refined and finalized.

### **Maps and Statistics**

Statistics for buffer zones was generated in Arc GIS software and different base maps, Land Use maps, reference and location maps were composed in Arc Map software.

## 8. Classification system

A three level classification system based on Environmental Impact Assessment Guidance Manual for mineral beneficiation prepared by Administrative Staff College of India, Hyderabad. (February 2010) has been adopted /modified for this study area and shown in table 3. Classes found in study area are considered in classification system.

**Table : 3 Land Use / Land Cover Classification System**

	Level – I	Level - II	Level - III
8.1	Built-up land	Residential	
		Industrial	
		Transportation	
8.2	Agricultural land	Crop Land	Kharif
			Rabi
			Kharif + Rabi
		Fallow Land	
		Horticulture Plantation	
8.3	Forest	Dense Forest	
		Open Forest	
8.4	Waste land	Dense Scrub	
		Open Scrub	
		Hill	
8.5	Water bodies	River/Nala	
		Lake/ Pond/ Reservoir	
		Mine Sump	
8.6	Others	Excavated area (Mining pits)	
		Afforestation Within Mining Pit Area	
		Afforestation	
		Stone Quarry	
		Waste Dump	
		Plantation on Waste Dump	
		Screen Reject Dump	
		Sub Grade Dump	
Soil Embankment			

		Mineral Stock Area	
		Back Filled Area	
		Plantation on Back Filled Area	

Following sections describe various classes. Examples of these classes with photographs taken during ground truth verification visit and corresponding portion of satellite image are shown in subsequent pages.

### **8.1 Built up land**

#### **Built-up Residential**

It generally refers to an area, which is not cultivated and is used for human residential purpose. Villages come under this category. Vacant land within or near by settlements used for industrial activities are also considered under this broad category.

#### **Built-up Industrial**

These are areas where the human activity is observed in the form of manufacturing along with other supporting establishments of maintenance. Heavy metallurgical industry, thermal, cement, petrochemical, engineering plants etc., are included under this. Certain built-up structures found in mining area like mine office, workshop are further classified in Infrastructure sub category.

#### **Transportation**

Land used for transportation and communication purpose like roads, railway and airport is also categories as built-up land.

### **8.2 Agricultural land**

This areas are primarily used for raising agricultural crops, fiber, vegetables, fruits, cultivated fodder and other plant material of medicinal and commercial value. Three classes, crop land, fallow land and afforestation/plantation sites are identified in the study area. Croplands are sub classified as (1) Kharif (2) Rabi (3) Kharif + Rabi.

#### **Crop land**

Areas with standing crop in any or either of the two common growing seasons are classified as crop land. Crops grown in June-July and harvested during September-October are called as **kharif** crops. Crops sown during November-December and harvested during February-March are called **rabi** crops. Areas sown during both the seasons form double cropped area.

### **Fallow Land**

The land not sown for current seasons which appears to be vacant is called 'Fallow Land'.

### **Afforestation/Plantation**

These areas are separable from cropland, especially with the data acquired during rabi / Jayad seasons. In this area horticulture plantation /Orchard are not found. Only plantation found is that done by company. Afforestation appears in dark-red to red tone of different sizes with regular and sharp edges indicating the presence of a fence around. Forests are different from plantations characterized by big contiguous patches often having shape similar to natural or topographical features.

### **8.3 Forest Land**

Forests are defined as, "all lands bearing vegetative association dominated by trees of any size, exploited or not, capable of producing wood or other forest products and exerting an influence on climatic or water regimes or providing shelter for wild life and live stock".

#### **Dense Forest**

This category includes all the forest areas where the canopy cover/crown density of greater than 40%.

#### **Open Forest**

This category includes all the forest areas where the canopy cover/crown density of less than 40%.

### **8.4 Wastelands**

Wasteland is described as degraded land which is currently not used for cultivation and is deteriorating for lack of appropriate water and soil management.

#### **Dense Scrub**

The area mainly covered by dense scrub classified under this category. This area is appears vegetated throughout the year.

#### **Open Scrub**

The area mainly covered by scrub which is sparse is classified as open scrub. It is land devoid of any vegetation and appears barren.

## **Hill**

A barren hill is a land form that extends above the surrounding terrain. It often has a distinct summit, although in areas with scarp/dip topography a barren hills may refer to a particular section of flat terrain without a massive summit.

## **8.5 Water bodies**

This class comprises areas of surface water found in the form of ponds, lakes, reservoirs.

### **River**

This is a natural course of water flowing on the land surface along a definite channel and may be seasonal or perennial.

### **Lake / Pond**

These are accumulation of water in a depression of various sizes either natural or man made.

### **Reservoir**

A water body built for the storage of water, usually by constructing a dam across a river is called reservoir.

## **8.6 Others**

### **Excavated area (Mining pits / Stone Quarry)**

These are the areas subjected to removal of different earth material or stone material (both surfacial and sub surfacial ) by manual/mechanized operations.

### **Dump**

Dumps are those areas where debris is accumulated after extraction of required minerals. Generally, these lands are confined to the surrounding of the active mining area.

### **Stock Area**

This is an area demarcated for piling raw material or finished material before transporting it to other places. This is seen like dump. The signature depends upon material.

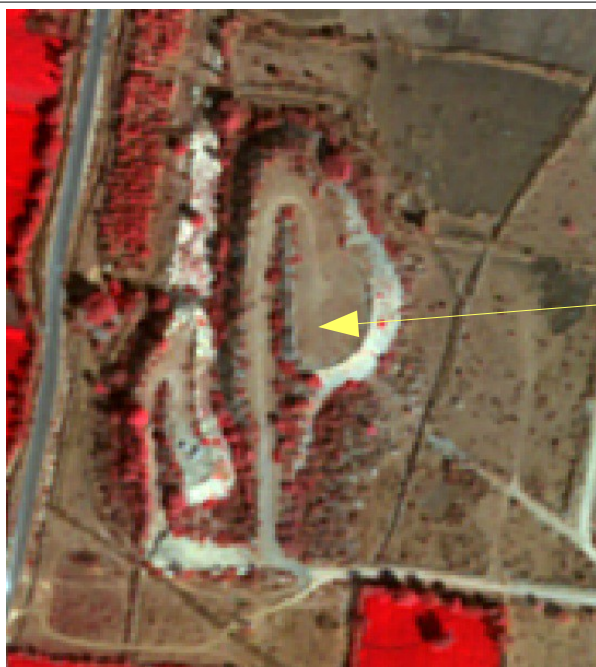
### **Back Filled Area**

After completion of mining activities, the mined out area is reclaimed by filling over burden material removed during excavation. These are called back filled areas.

Class Photographs & Satellite Images



Habitation



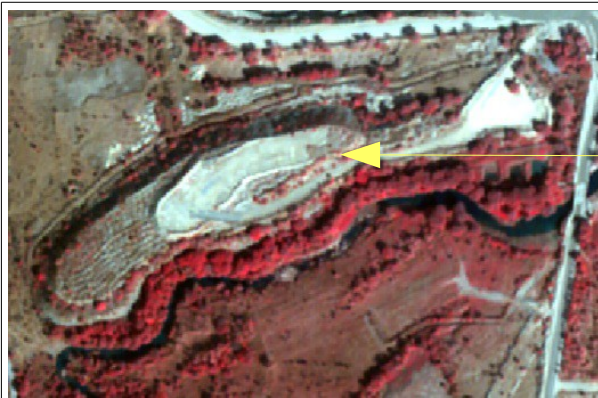
Dump



Plantation



Near Mine office



Plantation on Dump



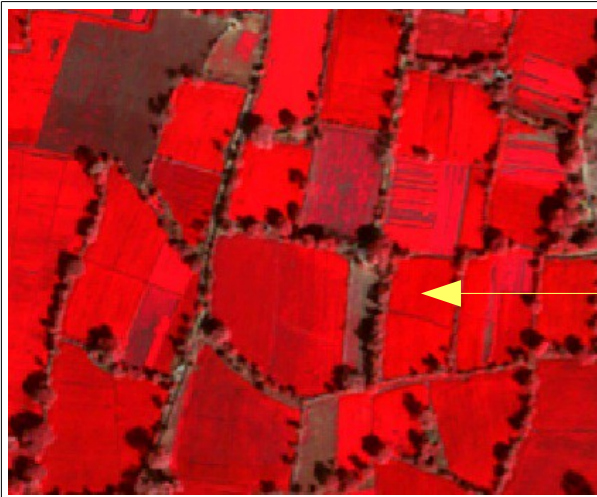


Mining Pit



Mining Pit





Agriculture



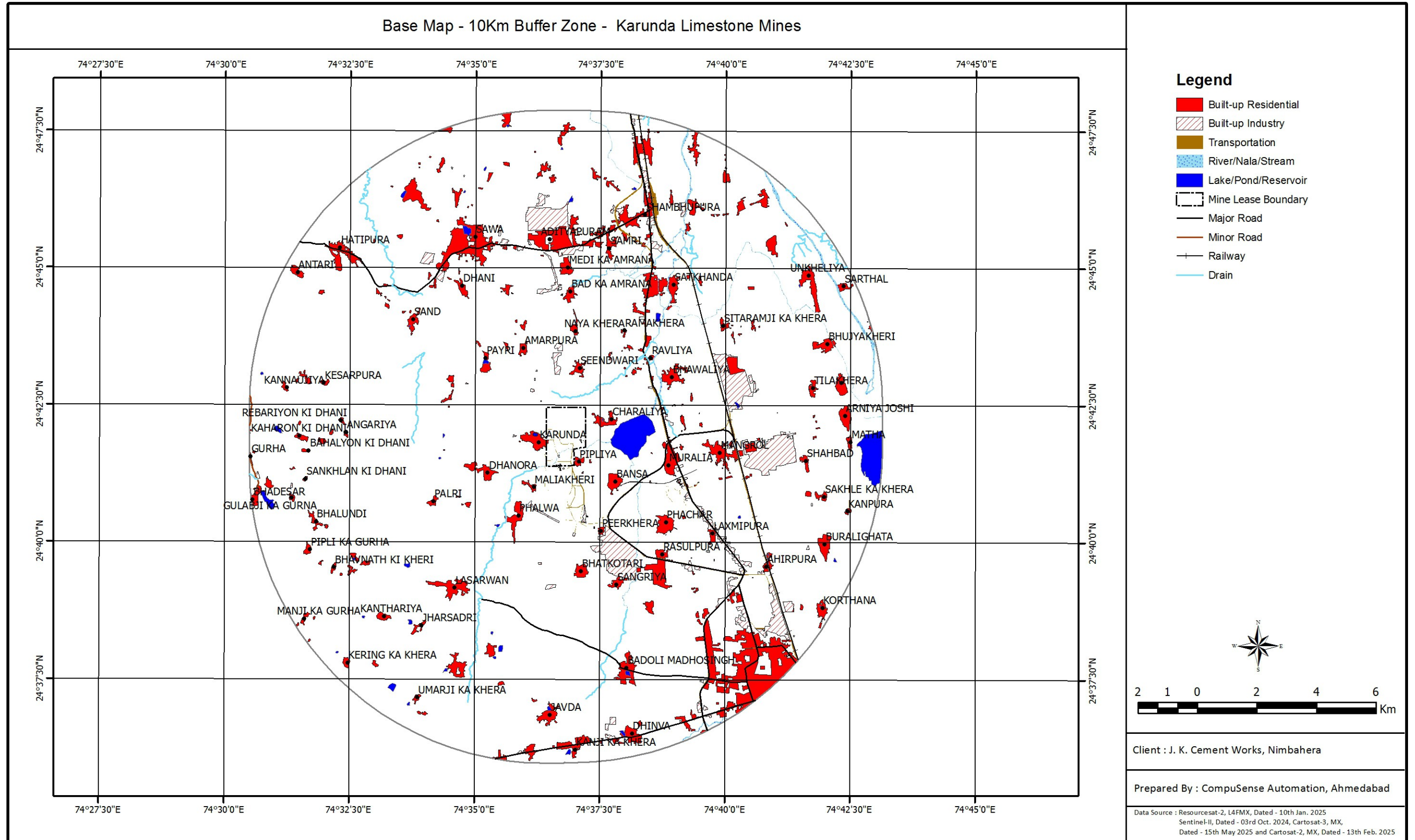
Buffer Area



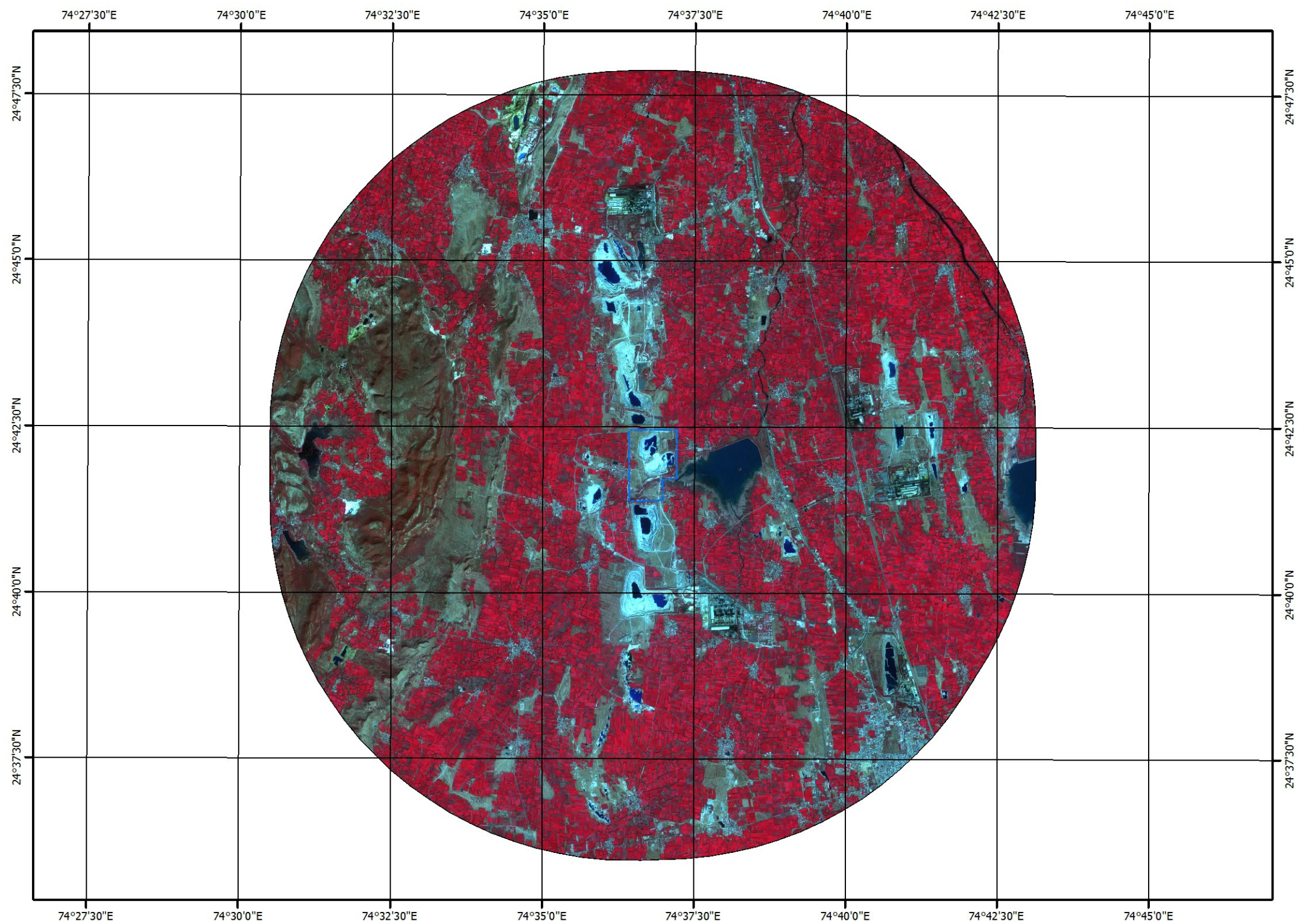
Transportation



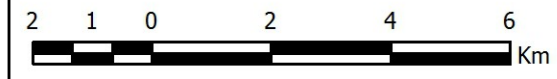
Figure : 2 Base Map and Satellite Image of Study Area



Satellite Image Map - 10Km Buffer Zone - Karunda Limestone Mines



**Legend**  
Mine Lease Boundary



Client : J. K. Cement Works, Nimbahera

Prepared By : CompuSense Automation, Ahmedabad

Data Source : Resourcesat-2, L4FMX, Dated - 10th Jan. 2025

## 9. Result (Statistics)

### 9.1 Within Mine Lease Area (MLA) (Core Zone)

<b>Table : 4 Land Use/Land Cover Statistics – Core Zone</b>				
<b>CLASSIFICATION</b>				
<b>LEVEL – I</b>	<b>LEVEL – II</b>	<b>LEVEL-III</b>	<b>% Area</b>	<b>Area (Ha)</b>
Built-up	Residential		0.42	1.02
	Industrial		0.48	1.16
	Transportation		1.81	4.36
		<b>Sub-total</b>	<b>2.71</b>	<b>6.53</b>
Agriculture Land	Crop Land	Kharif Crop	0.31	0.74
		Rabi Crop	0.24	0.59
		Kharif + Rabi Crop	1.77	4.26
	Fallow Land		0.33	0.79
		<b>Sub-total</b>	<b>2.65</b>	<b>6.38</b>
Wastelands	Open Scrub		45.24	108.96
		<b>Sub-total</b>	<b>45.24</b>	<b>108.96</b>
Water bodies	Nala		0.66	1.59
	Mine Sump		5.56	13.38
		<b>Sub-total</b>	<b>6.21</b>	<b>14.97</b>
Others	Excavated Area (Excluding Mine Sump)		23.23	55.96
	Afforestation		14.30	34.43
	Waste Dump		1.79	4.32
	Plantation on Waste Dump		0.403	0.97
	Sub Grade Dump		3.26	7.86
	Soil Embankment		0.20	0.47
		<b>Sub-total</b>	<b>43.19</b>	<b>104.02</b>
	<b>Total</b>	<b>100.00</b>	<b>240.86</b>	

Note – Pit area is sum of Excavated area and Mine Sump i.e. 69.34 Ha.

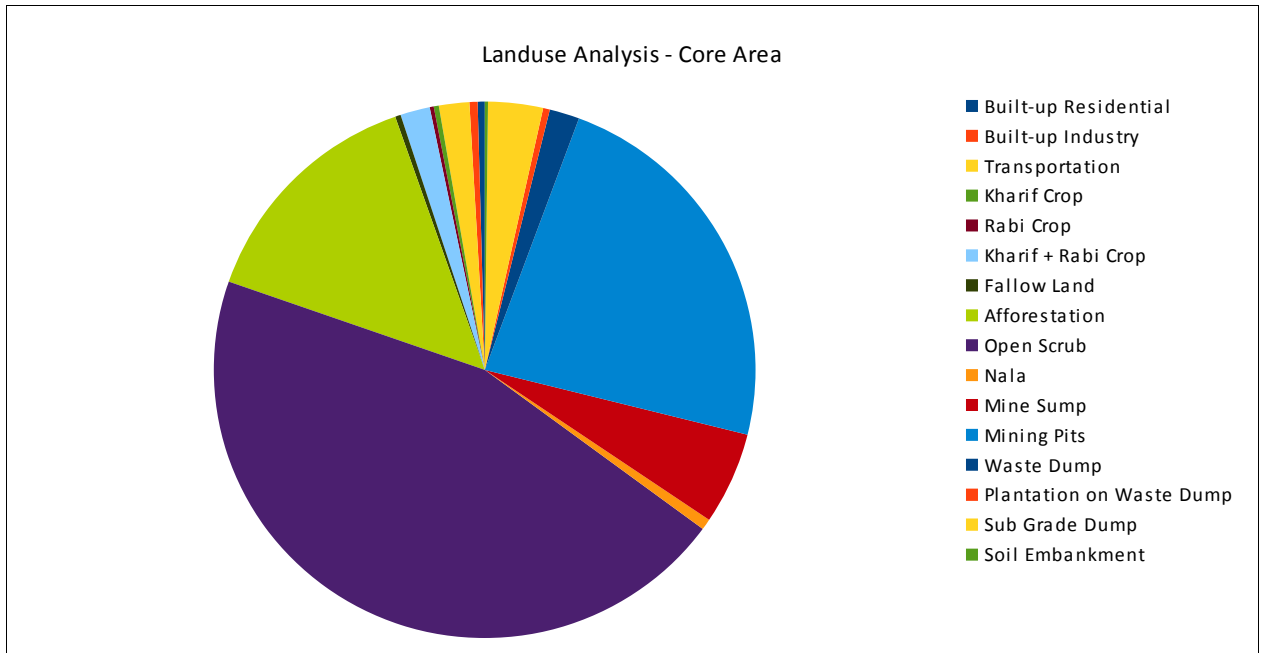
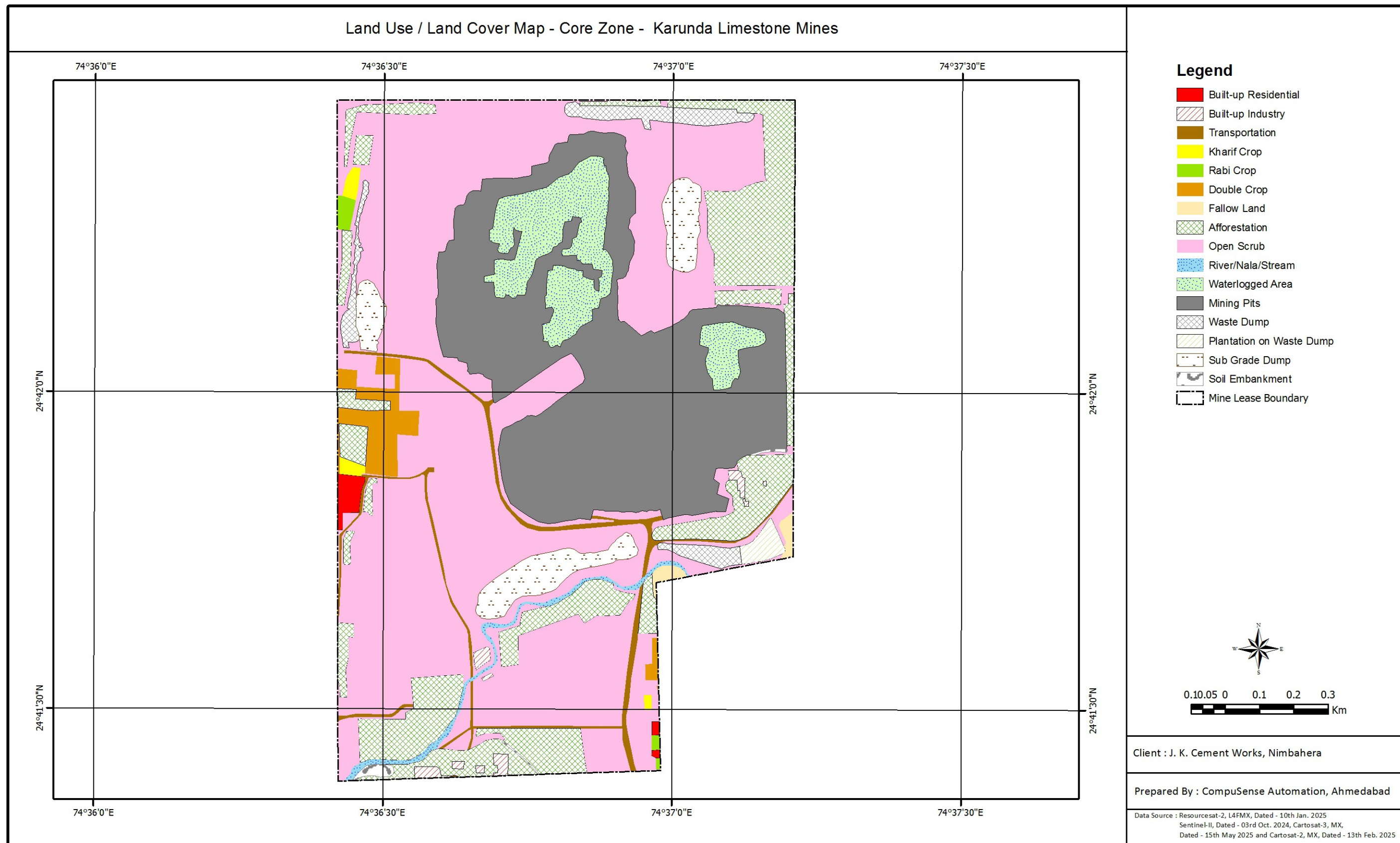


Figure : 3 Land Use / Land Cover Map Core Zone



9.2 500m Buffer Zone

Table : 5 Land Use/Land Cover Statistics – 500m Buffer Zone				
CLASSIFICATION				
LEVEL – I	LEVEL – II	LEVEL-III	% Area	Area (Ha)
Built-up	Residential		5.50	35.26
	Industrial		0.37	2.36
	Transportation		1.19	7.62
		<b>Sub-total</b>	<b>7.05</b>	<b>45.24</b>
Agriculture Land	Crop Land	Kharif Crop	2.07	13.26
		Rabi Crop	8.08	51.82
		Kharif + Rabi Crop	18.72	120.08
	Fallow Land		6.80	43.61
		<b>Sub-total</b>	<b>35.67</b>	<b>228.76</b>
Wastelands	Dense Scrub		0.31	1.97
	Open Scrub		27.45	176.02
		<b>Sub-total</b>	<b>27.75</b>	<b>177.99</b>
Water bodies	River		0.59	3.79
	Lake/Pond/Reservoir		0.24	1.54
	Mine Sump		4.77	30.58
		<b>Sub-total</b>	<b>5.60</b>	<b>35.91</b>
Others	Excavated Area (Excluding Mine Sump)		14.27	91.54
	Afforestation		7.53	48.26
	Waste Dump		0.67	4.32
	Plantation on Waste Dump		0.151	0.97
	Sub Grade Dump		1.23	7.86
	Soil Embankment		0.07	0.47
		<b>Sub-total</b>	<b>23.92</b>	<b>153.43</b>
	<b>Total</b>	<b>100.00</b>	<b>641.33</b>	

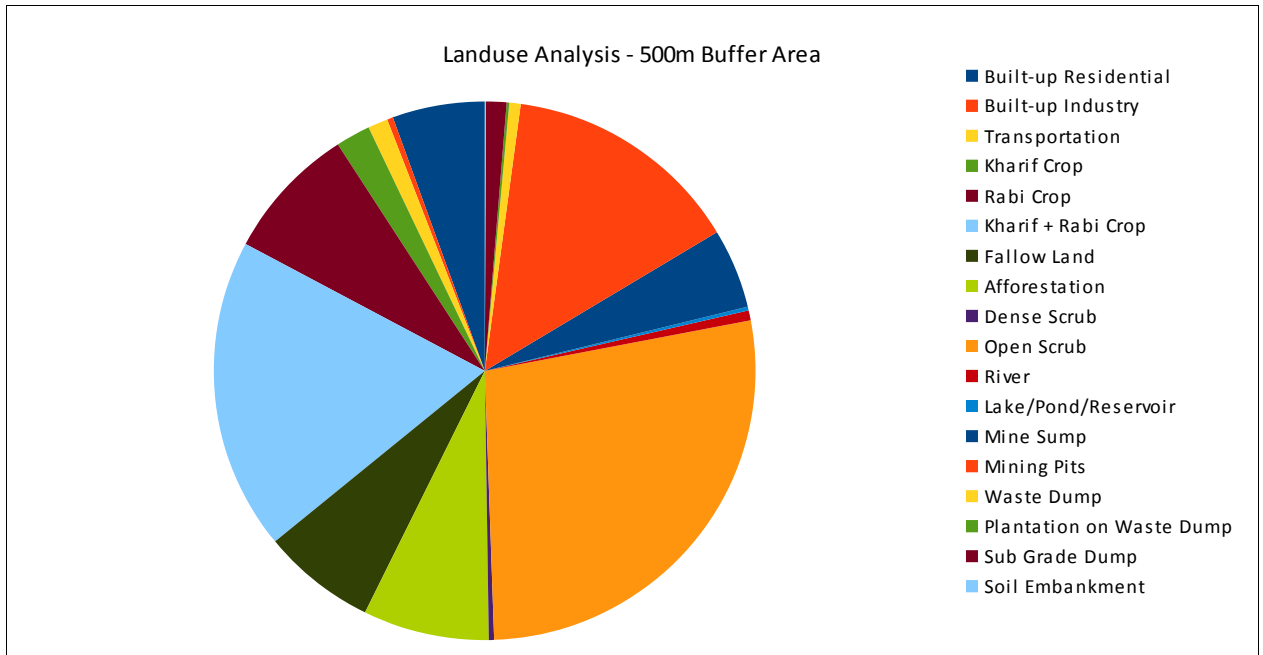
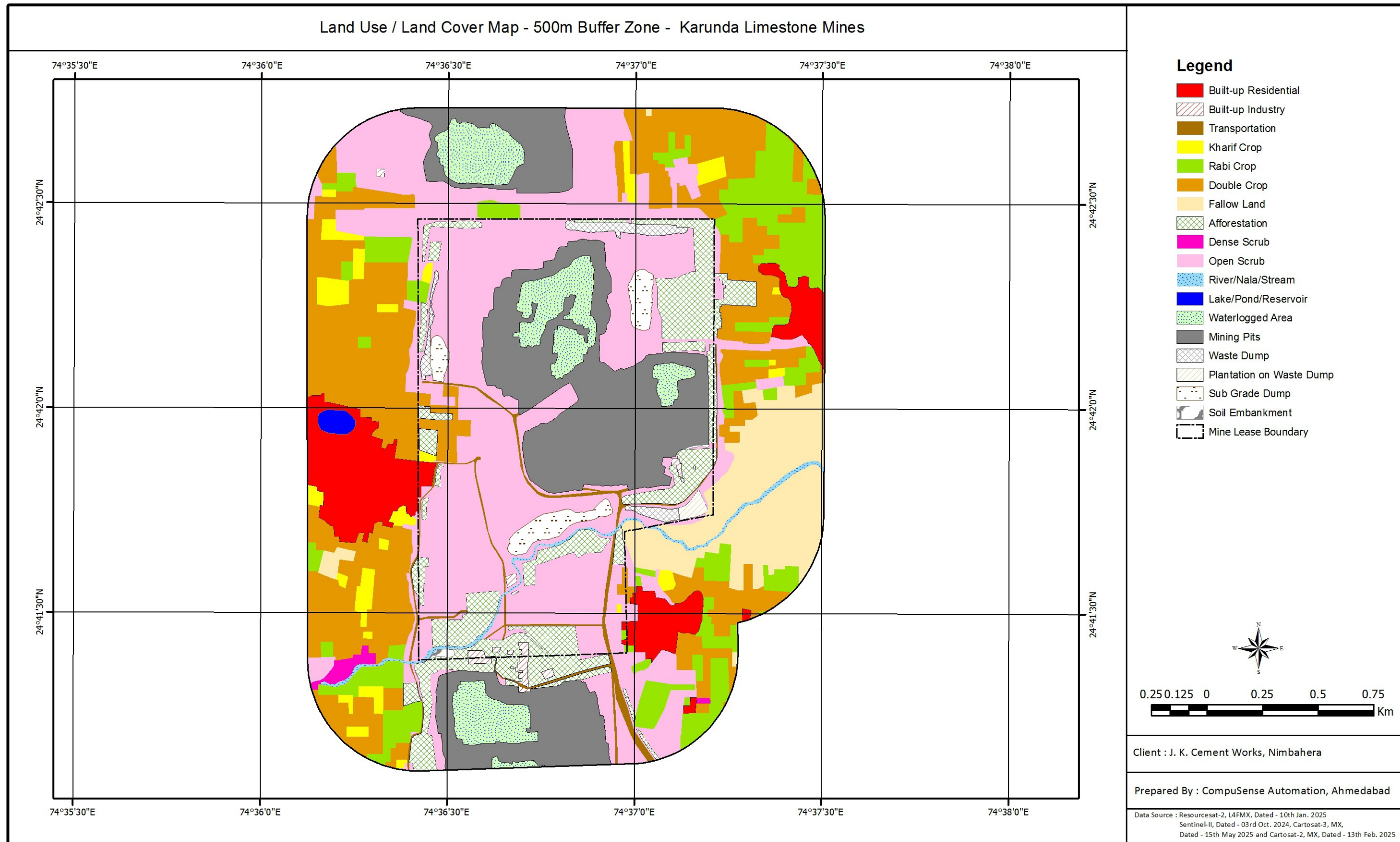


Figure : 4 Landuse /Landcover Map 500m Buffer Zone



9.3 5Km Buffer Zone

Table : 6 Land Use/Land Cover Statistics – 5Km Buffer Zone				
CLASSIFICATION				
LEVEL – I	LEVEL – II	LEVEL-III	% Area	Area (Ha)
Built-up	Residential		5.00	563.61
	Industrial		2.57	289.99
	Transportation		0.81	91.78
		<b>Sub-total</b>	<b>8.39</b>	<b>945.38</b>
Agriculture Land	Crop Land	Kharif Crop	11.54	1,300.21
		Rabi Crop	16.16	1,819.71
		Kharif + Rabi Crop	28.44	3,203.71
	Fallow Land		5.40	608.31
	Horticulture Plantation		0.01	0.64
		<b>Sub-total</b>	<b>61.55</b>	<b>6,932.58</b>
Forest	Dense Forest		0.40	45.40
	Open Forest		0.37	41.20
		<b>Sub-total</b>	<b>0.77</b>	<b>86.60</b>
Wastelands	Dense Scrub		0.15	16.40
	Open Scrub		17.27	1,944.95
	Hill		0.96	108.21
		<b>Sub-total</b>	<b>18.37</b>	<b>2,069.55</b>
Water bodies	River		0.41	46.43
	Lake/Pond/Reservoir		1.28	144.08
	Mine Sump		0.62	69.72
		<b>Sub-total</b>	<b>2.31</b>	<b>260.23</b>
Others	Excavated Area (Excluding Mine Sump)		5.77	649.87
	Afforestation		1.98	222.70
	Stone Quarry		0.25	27.70
	Waste Dump		0.35	39.14
	Plantation on Waste Dump		0.009	0.97
	Screen Reject Dump		0.02	2.50
	Sub Grade Dump		0.15	17.29
	Soil Embankment		0.00	0.47
	Mineral Stock Area		0.076	8.56
	<b>Sub-total</b>	<b>8.60</b>	<b>969.21</b>	
	<b>Total</b>	<b>100.00</b>	<b>11,263.55</b>	

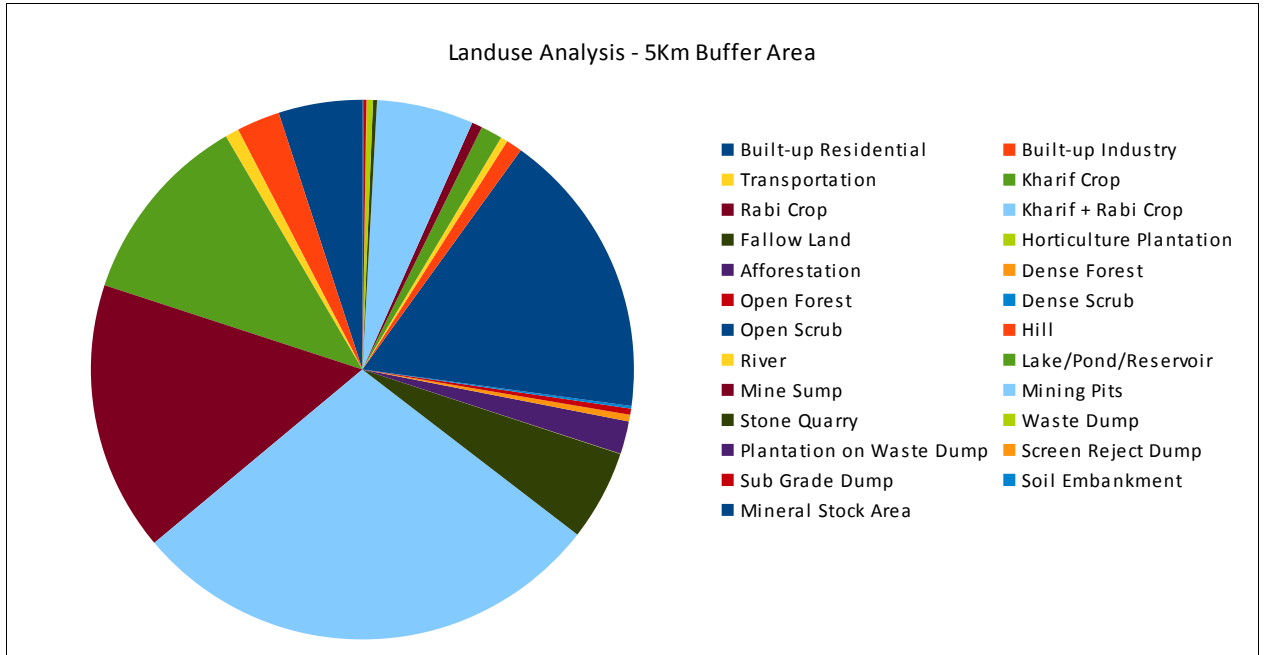
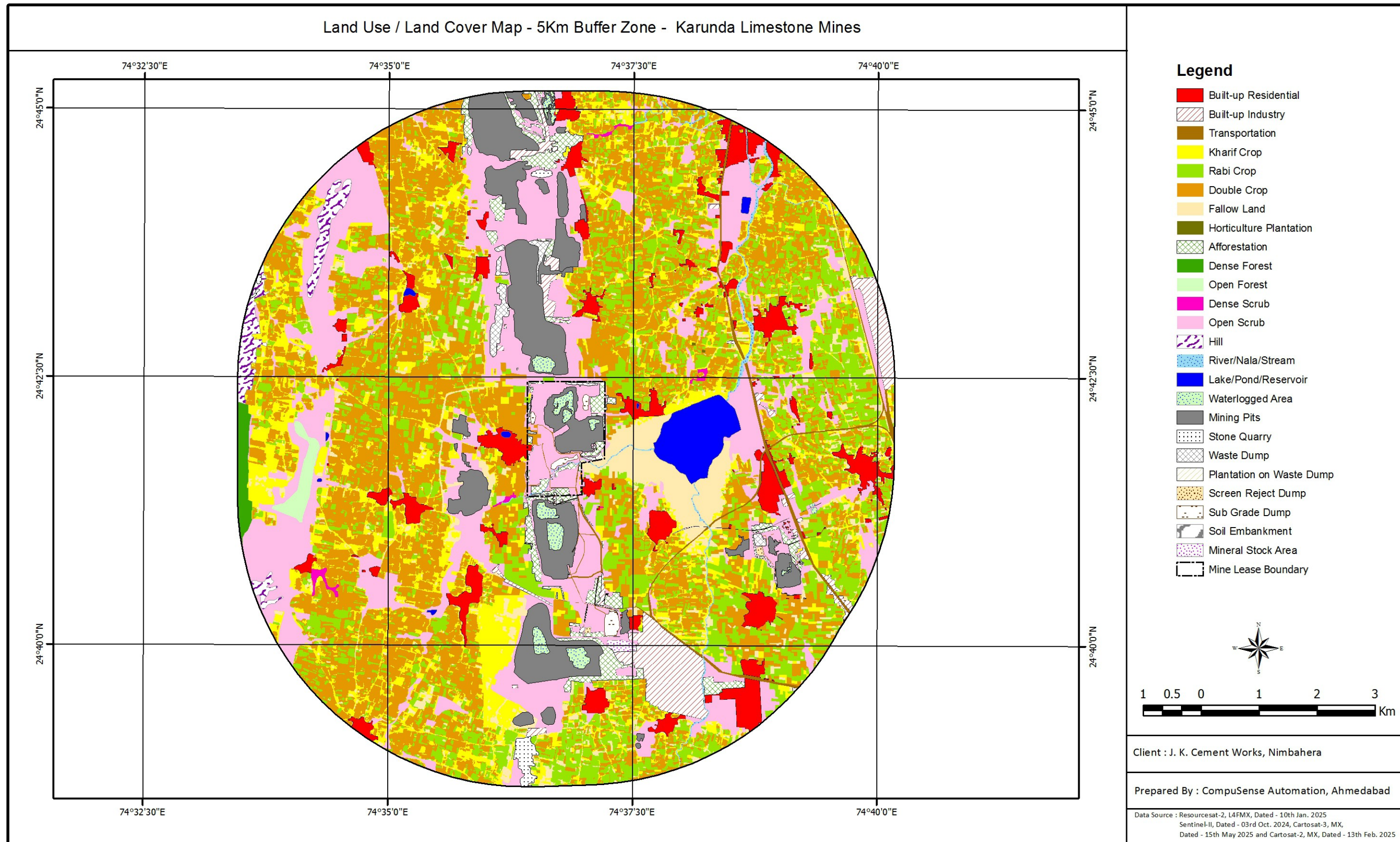


Figure : 5 Landuse / Landcover Map – 5km Buffer Zone



9.4 10Km Buffer Zone

Table : 7 Land Use/Land Cover Statistics – 10Km Buffer Zone				
CLASSIFICATION				
LEVEL – I	LEVEL – II	LEVEL-III	% Area	Area (Ha)
Built-up	Residential		5.94	2,256.10
	Industrial		2.30	872.45
	Transportation		0.63	240.22
		<b>Sub-total</b>	<b>8.87</b>	<b>3,368.77</b>
Agriculture Land	Crop Land	Kharif Crop	9.55	3,626.97
		Rabi Crop	20.44	7,760.08
		Kharif + Rabi Crop	24.44	9,281.17
	Fallow Land		5.56	2,110.94
	Horticulture Plantation		0.02	7.02
	<b>Sub-total</b>	<b>60.00</b>	<b>22,786.17</b>	
Forest	Dense Forest		5.83	2,215.12
	Open Forest		1.82	689.61
		<b>Sub-total</b>	<b>7.65</b>	<b>2,904.73</b>
Wastelands	Dense Scrub		0.70	265.52
	Open Scrub		15.39	5,844.75
	Hill		1.10	415.92
		<b>Sub-total</b>	<b>17.19</b>	<b>6,526.18</b>
Water bodies	River		0.45	171.64
	Lake/Pond/Reservoir		0.82	312.77
	Mine Sump		0.33	125.58
		<b>Sub-total</b>	<b>1.61</b>	<b>610.00</b>
Others	Excavated Area (Excluding Mine Sump)		2.82	1,070.68
	Afforestation Within Mining Pit Area		0.01	4.30
	Afforestation		1.07	405.33
	Stone Quarry		0.40	150.41
	Waste Dump		0.30	113.66
	Plantation on Waste Dump		0.003	0.97
	Screen Reject Dump		0.01	2.50
	Sub Grade Dump		0.05	17.29
	Soil Embankment		0.01	2.71
	Back Filled Area		0.005	1.81
	Plantation on Back Filled Area		0.001	0.25
	Mineral Stock Area		0.023	8.56
	<b>Sub-total</b>	<b>4.68</b>	<b>1,778.45</b>	
	<b>Total</b>	<b>100.00</b>	<b>37,974.31</b>	

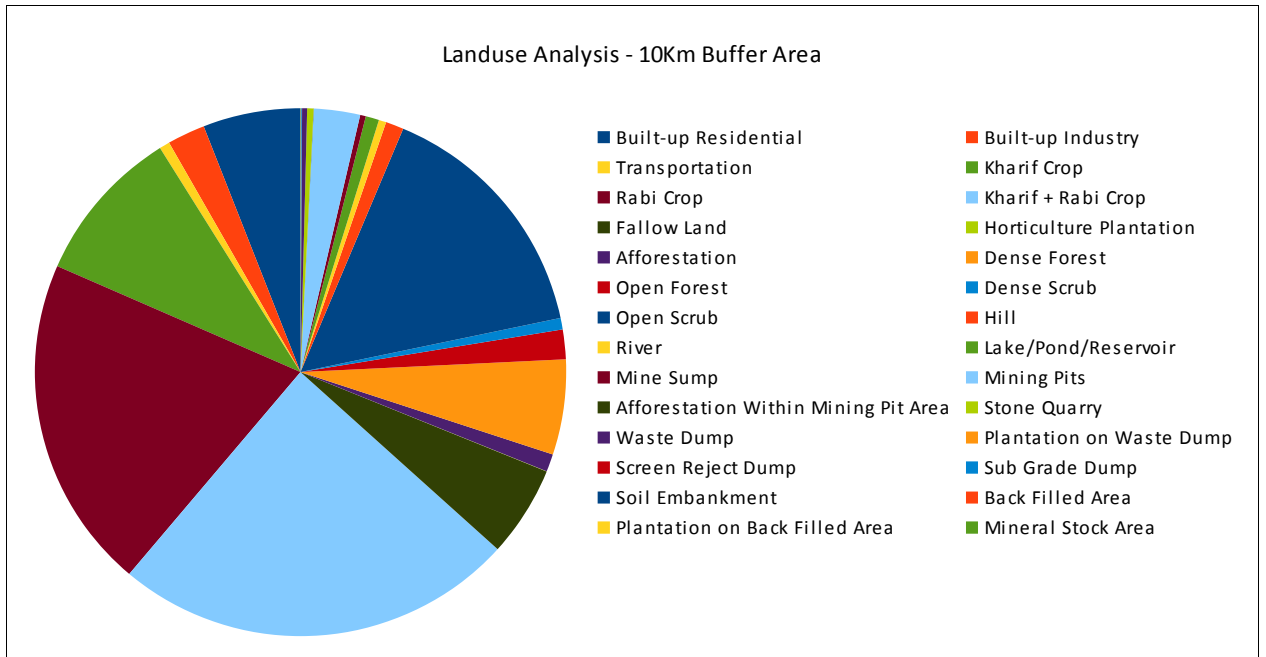
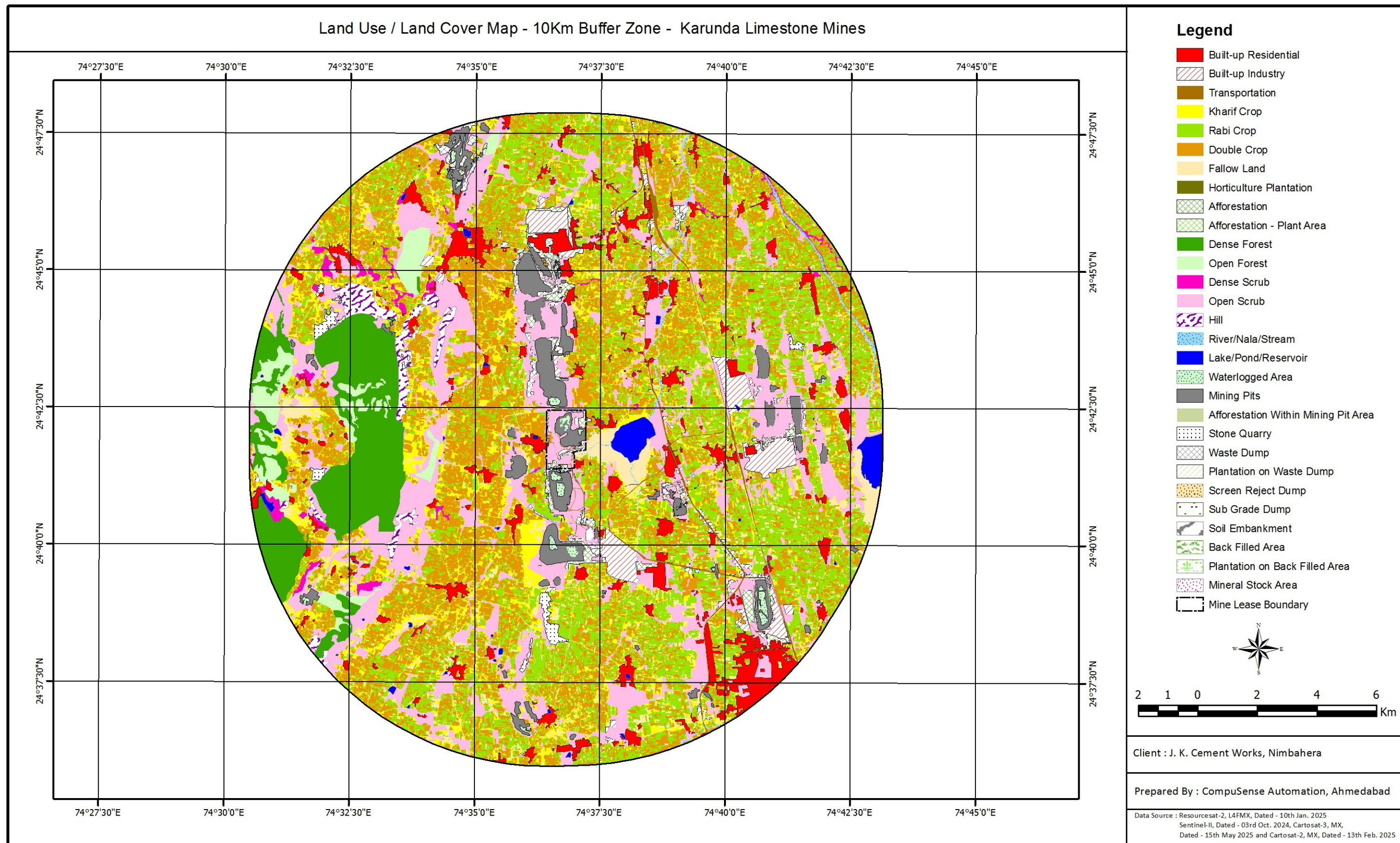


Figure : 6 Landuse/Landcover Map – 10km Buffer Zone



**Annexure : 1      Projection Parameters**

- **Projection Type** : Universal Transverse Mercator zone 43N
- **Spheroid Name** : WGS84
- **Datum** : WGS84
- **Parameters**
- **False\_Easting** : 500000.000000
- **False\_Northing** : 0.000000
- **Central\_Meridian** : 75.000000
- **Scale\_Factor** : 0.999600
- **Latitude\_Of\_Origin** : 0.000000
- **Linear Unit** : Meter (1.000000)
- **Geographic**
- **Coordinate System** : GCS\_WGS\_1984
- **Angular Unit** : Degree (0.017453292519943299)
- **Prime Meridian** : Greenwich (0.000000000000000000)
- **Datum** : D\_WGS\_1984
- **Spheroid** : WGS\_1984
- **Semimajor Axis** : 6378137.000000000000000000
- **Semiminor Axis** : 6356752.314245179300000000
- **Inverse Flattening** : 298.257223563000030000

Annexure : 2 Interpretation Key

Land Use / Land Cover Interpretation Key Using Satellite Imagery

Sr. No.	Land Use / Land Cover Category	Tone / Colour	Size	Shape	Texture	Pattern
1	Built-up Land	Dark bluish green in the core and bluish on the periphery	Small to big	Irregular & Discontinuous	Coarse & mottled	Clustered to Scattered & non-contiguous
2	Transportation	Very dark to dark bluish green, light yellow for minor roads , red if vegetation along the road	Small in width for roads and narrow for rail	Regular with straight/sharp and smooth curves	Smooth to fine	Linear to sinuous and contiguous
3	Crop Land	Bright red to red	Varying in size	Regular to irregular	Medium to smooth	Contiguous to non-contiguous
4	Fallow Land	Yellow to greenish blue (depending on soil type and moisture)	Small to large	Regular to irregular	Medium to smooth	Contiguous to non-contiguous
5	Afforestation (Plantation)	Dark red to red	Small to medium	Regular with sharp edges	Coarse to medium	Dispersed, contiguous
6	Dense Forest	Bright red to dark red	Varying in size	Irregular, discontinuous	Smooth to medium depending up on crown density	Contiguous to non contiguous
7	Open Forest	Light yellow to light brown	Small	Regular to irregular	Coarse to mottled	Non-contiguous dispersed /scattered
8	Land with or without scrub	Light yellow to brown to greenish blue(subject to surface moisture and cover	Varying in size	Irregular-discontinuous	Coarse to mottled (Subject to vegetation cover)	Contiguous dispersed in patches
9	River	Light blue to dark blue	Long narrow to wide	Irregular, Sinuous	Smooth to medium	Contiguous, nonlinear to dendritic/ sub-dendritic etc.
10	Lake/Pond	Light blue to dark blue(subject to weeds/vegetation)	Small/medium to large	Regular to irregular	Smooth to mottled	Non-contiguous dispersed

Interpretation keys may change for different satellite sensors depending upon their band combinations and enhancement made.