JK Cement Works, Hamirpur
(Formerly known as Jaykaycem (Central) Ltd. now amalgamated)
A unit of JK Cement Ltd.
CIN: L17229UP1994PLC017199
Village : Ingohata, Pargana - Sumerpur
District : Hamirpur, Uttar Pradesh - 210502

Ref: JK/HGU/88

Date : 26/05/25

To,
The Deputy Director General of Forest (C)
Integrated Regional Office,
Kendriya Bhawan, 5th Floor, Sector-H,
Aliganj, PIN Code: - 226020, Lucknow (UP) ,Email: - rocz.lko-mef@nic.in

Subject: Half Yearly Environmental Clearance Compliance Report of Clinker grinding unit Expansion,Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta,Pargana- Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s JK Cement Limited for the period Oct.'24-Mar'25.

Ref.No. - EC Identification no. - EC24B1103UP5318256N

Dear Sir,

With reference to above stated Environment Clearance (EC), please find herewith enclosed Half Yearly Environmental Clearance Compliance Report of our Clinker grinding unit Expansion,Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta,Pargana- Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s JK Cement Limited for the period Oct.'24-Mar'25.

For your kind reference and record please.

Thanking you,

Yours faithfully,
JK CEMENT LTD,HAMIRPUR

Dr. Sachin Gupta
(Unit Head)

Encl: As Above

CC:
1.CEO -2, UP Pollution Control Board, TC-12V, Paryavaran Bhawan, Vibhuti Khand, Gomti Nagar, PIN Code :- 226 010, **Lucknow** (U.P), E. mail:- ceo2@uppcb.com
2.The Regional Officer, UPPCB, 34A, Near Sant Tulsi Public School, Indranagar, **Banda**, PIN Code: - 210 001 (U.P), E. mail:- robanda@uppcb.com

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	SIA/UP/IND1/498051/2024
Compliance ID	127582896
Compliance Number(For Tracking)	EC/COMPLIANCE/127582896/2025
Reporting Year	2025
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	27-05-2025
RO/SRO Name	Shri Ashok Kumar Sinha
RO/SRO Email	tg035@ifs.nic.in
State	UTTAR PRADESH
RO/SRO Office Address	Integrated Regional Offices Lucknow
Note:- SMS and E-Mail has been sent to Shri Ashok Kumar Sinha, UTTAR PRADESH with Notification to Project Proponent.	

Half Yearly Compliance Report
2025
01 Jun(01 Oct - 31 Mar)

Acknowledgement

Proposal Name	Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana- Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Limited.
Name of Entity / Corporate Office	J K CEMENT LIMITED
Village(s)	INGOHTA
District	HAMIRPUR

Proposal No.	SIA/UP/IND1/498051/2024
Plot / Survey / Khasra No.	1731, 1732, 1734, 1735/I & 1735/2, 1737K, 1742 DH
State	UTTAR PRADESH
MoEF File No.	

Category	Industrial Projects - 1
Sub-District	Hamirpur
Entity's PAN	*****0355R
Entity name as per PAN	J K CEMENT LIMITED

Compliance Reporting Details

Reporting Year 2025

Remarks (if any)

Reporting Period 01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office J K CEMENT LIMITED

	Project Area as per EC Granted	Actual Project Area in Possession
Private	10.66	10.66
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	10.66	10.66

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details

1	GREENBELT	Greening and paving shall be implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface.
PPs Submission: Being Complied Greening and paving has been implemented in the plant area to arrest soil erosion and dust pollution exposed soil surface. Photograph of the same is enclosed as Annexure - 3.		Date: 26/05/2025
2	MISCELLANEOUS	Industry to strictly follow the CREP Compliance as per the directions of MoEF and CC,Govt. of India, CPCB and UPPCB from time to time for this nature of unit and submit a compliance report to the concerned authority.
PPs Submission: Being Complied CREP guidelines are being implemented in the unit.		Date: 26/05/2025
3	WATER QUALITY MONITORING AND PRESERVATION	Project proponent should explore the possibility of reducing ground water usage and try to minimize in the future.
PPs Submission: Being Complied Agreed and complying with. Treated water from STP is being used for horticulture and for dust suppression purpose.		Date: 26/05/2025
4	MISCELLANEOUS	Performance test shall be conducted on all pollution control system every year and report shall be submitted to Regional office of the MoEF and CC.
PPs Submission: Being Complied Agreed and complying with.		Date: 26/05/2025
5	MISCELLANEOUS	The project proponent should prepared Wildlife Conservation Plan (WCP) for schedule-1 species found in the study area and submitted to State Forest and Wildlife Department for its approval.
PPs Submission: Complied Wildlife Conservation Plan attached as Annexure -1. It has been approved by Forest department.		Date: 26/05/2025
6	GREENBELT	Three tier green belts shall be developed with native species all along the periphery of the project. Site survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years (Miyawaki method to be adopted for plantation)
PPs Submission: Being Complied Agreed and complying with.		Date: 26/05/2025
7	Corporate Environmental Responsibility	Project proponent should invest the CER amount as per the proposal and submit the compliance report regularly to the concerned authority/Directorate of environment.
PPs Submission: Being Complied Details of work done under CER activities is enclosed as Annexure - 5.		Date: 26/05/2025
8	ENERGY PRESERVATION MEASURES	The project proponent will ensure exploitation of maximum possible potential of solar energy generation in the proposed project area and prefer to use it instead of conventional electricity in order to reduce the Green House Gas Emission causing climate change.

PPs Submission: Being Complied 25 KW roof top solar generation plant has been installed. Photograph attached as Annexure - 6.		Date: 26/05/2025
9	PUBLIC HEARING	Compliance of Public hearing conditions should be ensured.
PPs Submission: Being Complied Complaince of public hearing condition is being ensured.		Date: 26/05/2025
10	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall establish CAAQMS within the premises. Details of existing CAAQMS, if any, be submitted within a period of three months.
PPs Submission: Agreed to Comply Noted and agreed.		Date: 27/05/2025
11	Human Health Environment	Medical checkup of the workers deployed in the plant should be conducted in every 06 months. Allergy test should also be included in health checkup of works.
PPs Submission: Being Complied Medical checkup of workers are being done on regular basis. Sample Medical examination report is enclosed herewith as Annexure - 2.		Date: 26/05/2025
12	MISCELLANEOUS	Properly covered vehicles shall be used while transporting material and product.
PPs Submission: Being Complied Bulker are being used for transportation of fly ash. Other raw material trucks are fully covered. Photograph of the same is attached as Annexure - 4.		Date: 26/05/2025
13	MISCELLANEOUS	Arrangement regarding loader and trucks should be made to avoid to conjunction.
PPs Submission: Being Complied Agreed and complying with.		Date: 26/05/2025
14	MISCELLANEOUS	Industry shall not store any raw material and product in the open area. The raw material/product should be stored in closed vessels/covered shade.
PPs Submission: Being Complied Raw materials is being stored in covered shed. Photograph of the same is enclosed as Annexure - 7.1		Date: 26/05/2025
15	AIR QUALITY MONITORING AND PRESERVATION	Raw material handling should be such that there should be no Fugitive emission from the premises.
PPs Submission: Being Complied Agreed and complying with.		Date: 26/05/2025
16	AIR QUALITY MONITORING AND PRESERVATION	Fugitive dust emissions from all the sources shall be controlled with the help of Air Pollution Control System (APCS). Regular water spraying arrangement to be done on internal roads of the plant to suppress the dust emissions from vehicular movements.

PPs Submission: Being Complied Efficient Air Pollution Control (APC) system (Bag Filters) for all the dust generating points has been provided.		Date: 26/05/2025
17	PUBLIC HEARING	Directions/suggestions given during public hearing and commitment made by the project proponent should be strictly complied with.
PPs Submission: Being Complied Agreed and complying with.		Date: 26/05/2025
18	AIR QUALITY MONITORING AND PRESERVATION	Project proponent install ambient air quality monitoring station and display board for ambient air quality data in the industry premises.
PPs Submission: Being Complied Ambient air quality monitoring station has been installed at 4 locations, also LED display board for air quality data has been installed. Photograph of display board is attached as Annexure - 7.		Date: 26/05/2025

General Conditions

Sr.No.	Condition Type	Condition Details
1	AIR QUALITY MONITORING AND PRESERVATION	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
PPs Submission: Complied Sampling facility has been provided at stack of cement mill.		Date: 27/05/2025
2	AIR QUALITY MONITORING AND PRESERVATION	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
PPs Submission: Complied Appropriate Air Pollution Control (APC) system such as Bag house for cement mill and bag filters at transfer and Loading unloading points has been provided.		Date: 27/05/2025
3	AIR QUALITY MONITORING AND PRESERVATION	Petcoke dosing shall be controlled automatically to control SO2 emission from chimney within the prescribed limits.
PPs Submission: Complied Not Applicable, as condition is related to Integrated cement plant.		Date: 27/05/2025
4	AIR QUALITY MONITORING AND PRESERVATION	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

PPs Submission: Being Complied Fines collected in the pollution control devices and vacuum cleaning devices are being reused in the cement manufacturing process.		Date: 27/05/2025
5	AIR QUALITY MONITORING AND PRESERVATION	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
PPs Submission: Being Complied Trucks carrying raw materials are being covered with tarpaulin to prevent spillage and dust emission.		Date: 27/05/2025
6	Statutory compliance	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.
PPs Submission: Being Complied Agreed and agreed.		Date: 26/05/2025
7	Statutory compliance	This Environmental clearance is granted subject to final outcome of Honble Supreme Court of India, Honble High Court, Honble NGT and any other Court of Law, if any, as may be applicable to this project.
PPs Submission: Being Complied Noted and agreed.		Date: 26/05/2025
8	AIR QUALITY MONITORING AND PRESERVATION	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
PPs Submission: Being Complied Mechanical sweeping machines has been deployed for cleaning of plant roads and vacuum cleaners for cleaning shop floors. Photograph of the same has been attached as Annexure - 10.		Date: 27/05/2025
9	AIR QUALITY MONITORING AND PRESERVATION	The emission norms applicable for the cement plant shall be adhered to.
PPs Submission: Being Complied Noted and complied with.		Date: 27/05/2025
10	AIR QUALITY MONITORING AND PRESERVATION	Dioxin and Furan monitoring shall be carried out once in six months at cement kiln stack.

PPs Submission: Complied Not Applicable, as condition is related to Integrated cement plant.		Date: 27/05/2025
11	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04/06 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous and their nos.)
PPs Submission: Being Complied CEMS has been installed at process stacks for continuous emission monitoring, the data is transferred to SPCB and CPCB on regular basis.		Date: 27/05/2025
12	AIR QUALITY MONITORING AND PRESERVATION	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
PPs Submission: Complied ventilation system has been designed for adequate air changes as per norms.		Date: 27/05/2025
13	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120 degree each), covering upwind and downwind directions.
PPs Submission: Agreed to Comply Noted.		Date: 27/05/2025
14	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
PPs Submission: Being Complied Leakage detection and mechanized bag cleaning station has been provided for better maintenance of bags.		Date: 27/05/2025

15	AIR QUALITY MONITORING AND PRESERVATION	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
PPs Submission: Being Complied Conveyor belts have been covered. Closed bulkers are used for fly ash transportation. Photograph enclosed as Annexure - 11.		Date: 27/05/2025
16	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
PPs Submission: Being Complied Fugitive emission monitoring is being done in plant on regular interval.		Date: 27/05/2025
17	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces
PPs Submission: Being Complied Not applicable as ours is a cement grinding unit.		Date: 27/05/2025
18	AIR QUALITY MONITORING AND PRESERVATION	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
PPs Submission: Being Complied Raw material is being stores in covered shed to prevent dust emission.		Date: 27/05/2025
19	AIR QUALITY MONITORING AND PRESERVATION	The particulate matter emissions from the process stacks shall be less than 30 mg/Nm3 and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.
PPs Submission: Being Complied The particulate matter emissions from the process stack is maintained at less than 30 mg/Nm3. Monitoring results are attached as Annexure - 12.		Date: 27/05/2025
20	AIR QUALITY MONITORING AND PRESERVATION	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.
PPs Submission: Being Complied CREP guideline are being followed in the plant.		Date: 27/05/2025
21	AIR QUALITY MONITORING AND PRESERVATION	The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling

		emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.
PPs Submission: Being Complied Adequate air pollution control system has been installed in the plant.		Date: 27/05/2025
22	AIR QUALITY MONITORING AND PRESERVATION	Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.
PPs Submission: Being Complied Bag filters are being cleaned regularly and efficiency of bag filter system are being monitored at regular intervals.		Date: 27/05/2025
23	AIR QUALITY MONITORING AND PRESERVATION	Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.
PPs Submission: Being Complied Noted and complying with.		Date: 27/05/2025
24	WATER QUALITY MONITORING AND PRESERVATION	Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.
PPs Submission: Being Complied 9 Numbers of Rain Water Harvesting pit have been installed in plant premises for harvesting rain water. Photograph enclosed as Annexure - 15.		Date: 27/05/2025
25	AIR QUALITY MONITORING AND PRESERVATION	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.
PPs Submission: Being Complied Covered vehicle are being used for transport of materials. Sufficient number of mechanical sweeping machine are deployed for sweeping at plant roads.		Date: 27/05/2025
26	AIR QUALITY MONITORING AND PRESERVATION	DeSOx system shall be provided dry type. NOx level shall be maintained below 600 mg/Nm3 by using best available technology.

PPs Submission: Complied Not Applicable, as condition is related to Integrated cement plant.		Date: 27/05/2025
27	AIR QUALITY MONITORING AND PRESERVATION	PP shall identify the Source of fluoride emissions and action plan to mitigate the same shall be implemented.
PPs Submission: Complied Not Applicable.		Date: 27/05/2025
28	WATER QUALITY MONITORING AND PRESERVATION	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
PPs Submission: Being Complied STP has been installed for treatment of domestic wastewater to meet the prescribed standards. Photograph of the same is enclosed as Annexure - 14.		Date: 27/05/2025
29	AIR QUALITY MONITORING AND PRESERVATION	Provide Low NOx burners as primary measures and SCR /NSCR technologies as secondary measure to control NOx emissions.
PPs Submission: Complied Not Applicable, as condition is related to Integrated cement plant.		Date: 27/05/2025
30	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
PPs Submission: Complied Cement manufacturing is a dry process, no effluent is being generated from plant operation.		Date: 27/05/2025
31	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
PPs Submission: Being Complied Measures has been taken to minimize use of fresh water, i.e. installation of STP.		Date: 27/05/2025
32	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant

		and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
PPs Submission: Being Complied Ground water quality is being monitored on regular basis. Monitoring result are attached as Annexure - 13.		Date: 27/05/2025
33	AIR QUALITY MONITORING AND PRESERVATION	Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
PPs Submission: Being Complied CREP guidelines are being followed.		Date: 27/05/2025
34	WATER QUALITY MONITORING AND PRESERVATION	The proposed project shall be designed as Zero Liquid Discharge Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.
PPs Submission: Being Complied Zero Liquid Discharge is being maintained.		Date: 27/05/2025
35	WATER QUALITY MONITORING AND PRESERVATION	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
PPs Submission: Being Complied Garland drains and collection pits have been provided.		Date: 27/05/2025
36	WATER QUALITY MONITORING AND PRESERVATION	Tyre washing facilities shall be provided at the entrance of the plant gates.
PPs Submission: Being Complied Adequate number of mechanical sweeping machines has been deployed for cleaning of plant roads and workzone areas.		Date: 27/05/2025
37	WATER QUALITY MONITORING AND PRESERVATION	Water meters shall be provided at the inlet to all unit processes in the steel plants.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
38	Noise Monitoring & Prevention	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

PPs Submission: Being Complied The ambient noise levels has been monitored and has been conformed to the standards prescribed under E(P)A Rules, 1986. Monitoring result are attached as Annexure - 16.		Date: 27/05/2025
39	WATER QUALITY MONITORING AND PRESERVATION	All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.
PPs Submission: Being Complied Stockyards have RCC flooring and water spray system has been installed for dust suppression.		Date: 27/05/2025
40	Noise Monitoring & Prevention	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
PPs Submission: Being Complied Noise pollution monitoring is being done on regular basis.		Date: 27/05/2025
41	ENERGY PRESERVATION MEASURES	Provide LED lights in their offices and residential areas.
PPs Submission: Complied LED Lights has been provided in offices area and plant premises.		Date: 27/05/2025
42	ENERGY PRESERVATION MEASURES	The project proponent make efforts to achieve power consumption less than 65 units/tonne for Portland Pozzolona Cement (PPC) and 85 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
PPs Submission: Being Complied Complying with.		Date: 27/05/2025
43	ENERGY PRESERVATION MEASURES	Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.
PPs Submission: Being Complied Utilization of fly ash, slag and sweetener in cement blend is being done as as per BIS standards.		Date: 27/05/2025
44	ENERGY PRESERVATION MEASURES	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

PPs Submission: Complied Solar power plant has been installed on roof top of building.		Date: 27/05/2025
45	ENERGY PRESERVATION MEASURES	Maximize utilization of alternate fuels and Co-processing to achieve best practice norms.
PPs Submission: Being Complied Agreed and complying with.		Date: 27/05/2025
46	WASTE MANAGEMENT	100 percent utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry Regional Office.
PPs Submission: Being Complied Fly ash is being sourced from nearby power plant for utilization in cement production in our cement grinding unit.		Date: 27/05/2025
47	GREENBELT	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
PPs Submission: Being Complied Greening and Paving has been implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface."		Date: 27/05/2025
48	ENERGY PRESERVATION MEASURES	Restrict Gas flaring to less than 1 percent.
PPs Submission: Complied Not Applicable, ours is a cement grinding unit.		Date: 27/05/2025
49	WASTE MANAGEMENT	Solid waste utilization: a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b. PP shall recycle/reuse solid waste generated in the plant as far as possible. c. Used refractories shall be recycled as far as possible.
PPs Submission: Being Complied Not Applicable as ours is a cement grinding unit.		Date: 27/05/2025
50	ENERGY PRESERVATION MEASURES	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
PPs Submission: Complied Not Applicable, ours is a cement grinding unit.		Date: 27/05/2025

51	WASTE MANAGEMENT	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
PPs Submission: Being Complied Noted.		Date: 27/05/2025
52	PUBLIC HEARING	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.
PPs Submission: Being Complied Workers are deployed after medical examination. Sample medical report is attached as Annexure - 2.		Date: 27/05/2025
53	WASTE MANAGEMENT	Kitchen waste shall be composted or converted to biogas for further use.
PPs Submission: Being Complied Kitchen waste converter to manure has been installed in plant. Photograph attached as Annexure - 16.1		Date: 27/05/2025
54	ENERGY PRESERVATION MEASURES	Waste heat recovery system shall be provided for kiln and cooler.
PPs Submission: Being Complied Not Applicable. Ours is a cement grinding unit.		Date: 27/05/2025
55	GREENBELT	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of companys carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.
PPs Submission: Being Complied Noted and Agreed.		Date: 27/05/2025
56	WASTE MANAGEMENT	Used refractories shall be recycled as far as possible.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
57	GREENBELT	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for

		reduction of the same including carbon sequestration by trees.
PPs Submission: Being Complied GHG inventory is prepared. Report of the same can be accessed through the link provided below: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.jkcement.com/wp-content/uploads/2024/07/Sustainabilty-Report-2023-24-1.pdf		Date: 27/05/2025
58	WASTE MANAGEMENT	The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines-3/. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
59	WASTE MANAGEMENT	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
PPs Submission: Being Complied Noted and Agreed.		Date: 27/05/2025
60	PUBLIC HEARING	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
PPs Submission: Being Complied Proper PPEs are given to all the staffs and workmen.		Date: 27/05/2025
61	PUBLIC HEARING	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may

		be in the form of temporary structures to be removed after the completion of the project.
PPs Submission: Complied Noted and agreed.		Date: 27/05/2025
62	PUBLIC HEARING	All the commitments made towards socio-econmic development of the nearby villages shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEFCC. PP shall adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.
PPs Submission: Being Complied Agreed and complying with.		Date: 27/05/2025
63	MISCELLANEOUS	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
64	PUBLIC HEARING	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
PPs Submission: Being Complied Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) has been implemented.		Date: 27/05/2025
65	MISCELLANEOUS	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent website permanently.
PPs Submission: Being Complied Complied with. please refer annexure No - 18		Date: 27/05/2025
66	MISCELLANEOUS	The project proponent shall monitor the

		criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
PPs Submission: Being Complied Regular monitoring of Ambient air and stack emission is being done by NABL recognized lab.		Date: 27/05/2025
67	MISCELLANEOUS	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented
PPs Submission: Being Complied Internal roads has been constructed.		Date: 27/05/2025
68	MISCELLANEOUS	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
PPs Submission: Being Complied Six-monthly reports on the status of the compliance of the stipulated environmental conditions is being uploaded on Parivesh portal.		Date: 27/05/2025
69	MISCELLANEOUS	The project proponent shall submit the environmental statement for each financial year in Form- V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
PPs Submission: Being Complied Environmental statement is being submitted on regular basis.		Date: 27/05/2025
70	MISCELLANEOUS	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
71	MISCELLANEOUS	The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest

		Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF and CC.
PPs Submission: Being Complied Noted.		Date: 27/05/2025
72	MISCELLANEOUS	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.
PPs Submission: Being Complied Details of activities done under CER initiatives is enclosed as Annexure - 5.		Date: 27/05/2025
73	MISCELLANEOUS	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
74	MISCELLANEOUS	The project proponent shall comply with the provisions contained in this Ministry OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
PPs Submission: Being Complied Agreed and complying with.		Date: 27/05/2025
75	MISCELLANEOUS	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any

		infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF CC as a part of six-monthly report.
PPs Submission: Being Complied The company has a well laid down environmental policy duly approve by the Board of Directors. Same has been attached as Annexure - 17.		Date: 27/05/2025
76	MISCELLANEOUS	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEFCC.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
77	MISCELLANEOUS	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
PPs Submission: Being Complied Copies of the environmental clearance has been submitted to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government. Please refer enclosure No 19.		Date: 27/05/2025
78	MISCELLANEOUS	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
PPs Submission: Being Complied A separate Environmental Cell both at the project and company head quarter level has been setup.		Date: 27/05/2025
79	MISCELLANEOUS	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
PPs Submission: Being Complied status of compliance of the stipulated environment clearance conditions, including results of monitored data is being displayed on company website with below provided URL: https://www.jkcement.com/environmental-		Date: 27/05/2025

compliance/		
80	MISCELLANEOUS	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
PPs Submission: Being Complied Noted.		Date: 27/05/2025
81	MISCELLANEOUS	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025
82	MISCELLANEOUS	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC)."
PPs Submission: Being Complied Agreed and complying with.		Date: 27/05/2025
83	MISCELLANEOUS	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
PPs Submission: Being Complied Noted.		Date: 27/05/2025
84	MISCELLANEOUS	Any appeal against this EC 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.
PPs Submission: Being Complied Noted and agreed.		Date: 27/05/2025

Visit Remarks

Last Site Visit Report Date:	N/A
Additional Remarks:	

Note: 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.

Annexure - 1

WILDLIFE CONSERVATION PLAN

FOR

PROPOSED EXPANSION IN CEMENT PRODUCTION CAPACITY FROM 2.0 MILLION TPA TO 3.0 MILLION TPA BY PROCESS OPTIMIZATION OF EXISTING STAND - ALONE GRINDING UNIT

AT
VILLAGE: INGOHTA, PARGANA - SUMERPUR, TEHSIL & DISTRICT: HAMIRPUR, UTTAR PRADESH

JKCement

M/S. JK CEMENT LIMITED

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EXECUTIVE SUMMARY

- JK Cement Ltd. is one of India's leading manufacturers of Grey Cement and one of the leading White Cement manufacturers in the World. Over four decades, the Company has partnered India's multi-sectoral infrastructure needs on the strength of its product excellence, customer orientation and technology leadership. JK Cement's operations commenced with commercial production at its flagship grey cement unit at Nimbahera, Rajasthan in May 1975.
- To meet the cement demand for increasing infrastructure development activities of private and governmental projects of region including construction of highways, roads, flyovers, bridges, building apartments and townships. Considering this, JK Cement Limited proposes an expansion in cement production capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization Of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh.
- M/s. JK Cement Ltd. has an existing Stand-alone Grinding Unit with cement production capacity of 2.0 million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Set (1250 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (Uttar Pradesh).

  As per EIA Notification dated 14th Sept., 2006, as amended from time to time; the project falls under Category "B", Project or Activity '3(b)' - Cement Plants.
- Environmental Clearance for the existing Stand-alone Grinding Unit of 2.0 Million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (UP) was obtained from SEIAA, Uttar Pradesh vide Ref. No. 202/Parya/SEIAA/6109/2021 dated 29th Sept., 2021 in the name of M/s. Jaykaycem (Central) Works.
- Now, M/s. JK Cement Ltd is Proposing an Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand – alone Grinding Unit at Village: Ingohta, Pargana- Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh.
- As per EIA Notification dated 14th Sept. 2006 & as amended thereof; this project falls under Category "B"; Project Activity '3 (b)' Cement Plant (Stand-alone Grinding Unit).
- The site is well connected to NH - 34 (Dewas - Kanpur Nagar) (adjacent in West direction). Nearest Town to the plant site is Town Sumerpur (~6.0 Km in NNE direction). Nearest Railway Station is Ingohta Railway Station (~1.0 Km in South direction) and nearest Airport is Kanpur Airport (~75 Km in NNE direction). The site is well connected with communication facilities like telephone, fax, wireless and telex and as such, no constraints are envisaged in this aspect as the Tehsil and District headquarters are near to the site.
- Total Plant area i.e., 11.7412 ha is under the possession of the company and the land use is industrial type.
- Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt development / plantation in accordance with CPCB guidelines and as

per the Miyawaki Method of Plantation. Out of which; 2.0932 ha area (with 8000 Nos. of saplings) has already been developed. Further 3000 saplings will be planted on additional land for proposed expansion & gap filling will be done to maintain the density of 2500/ha.

- No National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas exists within 10 km radius study area. There are total 97 species have been found in the study area in which 35 species are tree species, 8 species of grasses,16 species are shrubs species,38 species are herbs and climbers. Poaceae is the most occurred family in grasses. Fabaceae is the most occurred family in trees.
- There are total 28 species of faunal diversity in which 10 species are of mammals, 4 species of reptiles, two species of amphibians and 12 species of butterflies have been found in the study area.
- **Schedule-I Species** are: -

  (Canis aureus) Jackal, ***(Felis chaus)*** Jungle cat, ***(Herpestes edwardsii)*** Common Mongoose ***(Naja naja)*** Cobra, ***(Ptyas mucosus***) Rat Snake and Peafowl ***(Pavo cristatus).***
- **Capital Cost for the Project**: Rs. 35.5 Crores

  Cost for Environmental Protection Measures:
  - Capital Cost: Rs. 86.0 Lakhs
  - Recurring Cost: Rs. 39.2 Lakhs / annum

****

CHAPTER-I: INTRODUCTION

i. BRIEF NOTE ABOUT THE PROJECT AND ITS UTILITY

M/s. JK Cement Ltd. has an existing Stand-alone Grinding Unit with cement production capacity of 2.0 million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Set (1250 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (Uttar Pradesh).

As per EIA Notification dated 14th Sept., 2006, as amended from time to time; the project falls under Category "B", Project or Activity '3(b)' - Cement Plants.

Environmental Clearance for the existing Stand-alone Grinding Unit of 2.0 Million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (UP) was obtained from SEIAA, Uttar Pradesh vide Ref. No. 202/Parya/SEIAA/6109/2021 dated 29th Sept., 2021 in the name of M/s. Jaykaycem (Central) Works.

Jaykaycem (Central) Limited is wholly owned subsidiary Company of JK Cement Ltd.However, the Jaykaycem (Central) Limited has been merged with its holding company M/s. JK Cement Limited and as a result of which Jaykaycem (Central) Limited cease to exist. As per order of NCLT, Allahabad bench, Prayagraj, all the asset and liabilities of subsidiary company Jaykaycem (Central) stands transfer in to its holding company M/s. JK Cement Ltd. effective from 1 st Aug., 2023.

Thereafter, Name Change in Environmental Clearance letter granted for the existing Stand- alone Grinding Unit of 2.0 Million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (UP) was obtained from SEIAA, Uttar Pradesh vide Ref. No. 05/Parya/SEIAA/6109/2023 dated 2nd May, 2024.

ii. IDENTIFICATION OF PROJECT PROPONENT

JK Cement Ltd. is one of India's leading manufacturers of Grey Cement and one of the leading White Cement manufacturers in the World. Over four decades, the Company has partnered India's multi-sectoral infrastructure needs on the strength of its product excellence, customer orientation and technology leadership. JK Cement's operations commenced with commercial production at its flagship grey cement unit at Nimbahera, Rajasthan in May 1975.

The Company has an installed Grey Cement capacity of 22.17 Million TPA as on date, making it one of the top cement manufacturers in the Country. One of the leading manufacturers of White Cement, globally, with a total white cement capacity of 1.20 Million TPA and wall putty capacity of 1.2 Million TPA. JK White Cement is sold across 43 countries around the globe and the Company has a strong international presence with two subsidies, JK Cement Works Fujairah FZC and JK White Cement (Africa) Ltd.

iii. PROJECT PROPOSAL

M/s. JK Cement Ltd. has an existing Stand-alone Grinding Unit with cement production capacity of 2.0 million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125

KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (Uttar Pradesh).

Environmental Clearance for the existing Stand-alone Grinding Unit of 2.0 Million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (UP) was obtained from SEIAA, Uttar Pradesh vide Ref. No. 202/Parya/SEIAA/6109/2021 dated 29th Sept., 2021 in the name of M/s. Jaykaycem (Central) Works.

Jaykaycem (Central) Limited is wholly owned subsidiary Company of JK Cement Ltd. However, the Jaykaycem (Central) Limited has been merged with its holding company M/s. JK Cement Limited and as a result of which Jaykaycem (Central) Limited cease to exist. As per order of NCLT, Allahabad bench, Prayagraj, all the asset and liabilities of subsidiary company Jaykaycem (Central) stands transfer in to its holding company M/s. JK Cement Ltd. effective from 1st Aug., 2023.

Thereafter, Name Change {From M/s. Jaykaycem (Central) works Hamirpur to M/s. JK Cement Works)} in Environmental Clearance letter granted for the existing Stand-alone Grinding Unit of 2.0 Million TPA (7200 TPD PPC/OPC/PSC/Composite Cement) and D.G. Sets (1250 KVA & 125 KVA) at Village: Ingotha, Pargana- Sumerpur, District: Hamirpur (UP) was obtained from SEIAA, Uttar Pradesh vide Ref. No. 05/Parya/SEIAA/6109/2023 dated 2nd May, 2024.

Consent to Establish (CTE) for Existing Stand-alone Grinding Unit under Water and Air Act was obtained vide Ref No.: 133698/UPPCB/Banda (UPPCBRO)/CTE/HAMIRPUR/2021 dated 01/09/2021, Validity: 30/08/2021 to 29/08/2026.

Thereafter, Consent to Operate (CTO) in name of M/s. Jaykaycem (Central) works Hamirpur was obtained vide Ref No.: 158361/UPPCB/Banda (UPPCBRO)/CTO/both/HAMIRPUR/2022 dated 01/10/2022, Validity: 01/10/2022 to 31/12/2023. The CTO name change letter from M/s. Jaykaycem (Central) works Hamirpur to M/s. JK Cement Works has been obtained vide Ref No.: 194987/UPPCB/Banda (UPPCBRO)/CTO/both/HAMIRPUR/2023 dated 19/12/2023, validity: 01/01/2024 to 31/12/2028.

Table 1 Implementation Status of Existing Project

S. No.	Project Activity	Existing Granted Capacity as per EC	Installed Capacity as per CTO	Remarks
•	Cement (PPC/OPC/PSC/Composite Cement)	2.0 Million TPA	2.0 Million TPA	Implemented
•	D.G. Set	1250 KVA & 125 kVA	1250 KVA	Implemented

Table 2 Production Capacities Before and After Expansion

S. No.	Particulars	Unit	Existing Installed Capacity	Additional Capacity	Total capacity after Expansion
1.	Cement (PPC/OPC/PSC/Composite Cement)	Million TPA	2.0	1.0	3.0
2.	D.G. Sets	kVA	1250	Nil	1250

Table 3 Status of the Expansion Project with respect to Environment Clearance

S. No.	Project Activity	Details
1.	Application (Form - 1/ ToR and Pre - Feasibility Report) uploaded on Parivesh web portal	28th May, 2024
2.	Standard ToR Letter issued by SEIAA, Uttar Pradesh *vide* File No. 9037	6th June, 2024
3.	Baseline Monitoring & Data Collection	Pre-Monsoon (March., to May., 2024)

iv. NEED FOR THE PROJECT

India is the second largest producer of cement in the world. It accounts for more than 7% of the global installed capacity. India has a lot of potential for development in the infrastructure and construction site and the cement sector is expected to largely benefit from it. Centre has given huge infra boost with mega projects and demand for cement will grow at around 10% through to 2030 from these infrastructures such as the ambitious Bharatmala Pariyojana, Sagarmala Project, Smart Cities Mission, AMRUT (Atal Mission for Rejuvenation and Urban Transformation) and PMAY (Pradhan Mantri Awas Yojana) detailed hereunder: such as -

• In October 2021, Prime Minister, Mr. Narendra Modi, launched the 'PM Gati Shakti - National Master Plan (NMP)' for multimodal connectivity. Gati Shakti will bring synergy to create a world-class, seamless multimodal transport network in India. This will boost the demand for cement in the future.

• Under the housing for all segment, 8 million households will be identified according to the Budget 2022-23 with Rs. 48,000 crores (US$ 6.44 billion) set aside for PM Awas Yojana.

• As per the Union Budget 2022-23, the government approved an outlay of Rs. 1,99,107 crores (US$ 26.74 billion) for the Ministry of Road Transport and Highways, and this step is likely to boost the demand for cement.

• The Union Budget allocated Rs. 13,750 crore (US$ 1.88 billion) and Rs. 12,294 crores (US$ 1.68 billion) for Urban Rejuvenation Mission: AMRUT and Smart Cities Mission and Swachh Bharat Mission.

As per rating agency ICRA, the all-India cement production in FY22 at 332 million tonnes, up 12 per cent from last year supported by pent-up demand, rural housing requirement and pickup in infrastructure activity. The continuing demand for housing, accounting for 60-65 percent of cement demand, and aggressive government investments in infrastructure will drive demand, nudging cement-makers to add 145-155 MT in fresh capacity at an investment of Rs 1.2 lakh crore by FY27. Also, a significant factor which aids the growth of this sector is the ready availability of the raw materials for making cement.

(**Source**: Indian Cement Industry Report)**.**

To meet the cement demand for increasing infrastructure development activities of private and governmental projects of region including construction of highways, roads, flyovers, bridges, building apartments and townships. Considering this, JK Cement Limited proposes an expansion in cement production capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of

Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh.

Table 4 SALIENT FEATURES OF THE PROJECTS

S. NO.	PARTICULARS	DETAILS		
A.	**Nature of the Project**	Expansion Project		
B.	**Size of the Project**	Cement (PPC/OPC/PSC/Composite Cement) - 2.0 to 3.0 Million TPA		
C.	**Category of the Project**	As per EIA Notification dated 14th Sept., 2006 and as amended thereof; this project falls under S. No. 3 (Material Production), Category - 'B', Project Activity '3 (b)' Cement Plants (Standalone Grinding Unit).		
D.	**Location Details**			
	Khasra Nos.	1731, 1732, 1734, 1735/I & 1735/2, 1737K, 1742 DH		
	Village	Ingohta		
	Tehsil & District	Hamirpur		
	State	Uttar Pradesh		
	Latitude	25°46'8.66"N to 25°46'16.04"N		
	Longitude	80° 7'32.38"E to 80° 7'52.25"E		
	Toposheet No.	Core Zone- G44O1 (63C/1) Buffer Zone- G44O1 (63C/1), G44O2 (63C/2)		
E.	**Area Details**			
	Total Plant Area	The existing plant area is 10.6610 ha and proposed expansion will be done within the existing plant premises only. However, company is additional including the area of 1.0802 ha for greenbelt development and truck parking area. Thus, total plant area will be 11.7212 ha.		
	Greenbelt / Plantation Area (ha)	Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt development / plantation. Out of which; 2.0932 ha area (with 8000 Nos. of saplings) has already been developed. Further 3000 saplings will be planted on additional land for proposed expansion & gap filling will be done to maintain the density of 2500/ha.		
G.	**Cost Details**			
	Total Cost of the Project	Rs. 35.5 Crores		
	Cost for Environment Management Plan	○ Capital Cost - Rs. 86.0 Lakhs ○ Recurring Cost - Rs.39.2 Lakhs / annum		
H.	Basic Requirements for the project	**Existing**	**Additional**	**Total**
	Water Requirement (KLD)	200	-	200
		Source: Ground water (No-Objection Certificate (NOC) has been obtained from UPGWD for withdrawal of 200 KLD; Certificate no. NOC035062 & NOC031442 valid from 16/12/2021 to 15/12/2026).		
	Power Requirement (KVA)	13000	-	13000
		Source: Dakshinanchal Vidyut Vitran Nigam limited and D.G. set for emergency back-up.		

S. NO.	PARTICULARS		DETAILS		
	Manpower Requirement (No. of persons)				
	Particulars	**Type of Job**	**Existing**	**Additional**	**Total**
	Construction Phase	Contractual	0	123	123
	Operation Phase	Regular	45	0	45
		Contractual	249	38	287

Table 5 Brief Description of Nature, Size and Location of Project

S. No.	Particular	Detail
A.	**Nature of the Project**	Expansion Project
B.	**Size of the Project**	Cement (PPC/OPC/PSC/Composite Cement) - 2.0 to 3.0 Million TPA
C.	**Location Details**	
1.	Village	Ingohta
2.	Pargana	Sumerpur
3.	Tehsil & District	Hamirpur
4.	State	Uttar Pradesh
5.	Latitude	25°46'8.66"N to 25°46'16.04"N
6.	Longitude	80° 7'32.38"E to 80° 7'52.25"E
7.	SOI Toposheet No.	Core Zone- G44O1 (63C/1) Buffer Zone- G44O1 (63C/1), G44O2 (63C/2)

☙ **PROJECT DESCRIPTION**

Type of Project including interlinked and independent projects

M/s. JK Cement Ltd. is proposing an Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand-alone Grinding Unit Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh

- **Interlinked and Interdependent Projects:**

Interlinked Project:

Clinker is being/ will be sourced from Existing Integrated Cement Plants of JK Cement Limited i.e., JK Cement Works, Panna and others.

Interdependent Project*:* There is no interdependent project.

Table 6 Raw Material Requirements, Source & Transportation

S. No.	Raw Material	Existing Quantity	Additional Quantity	Total	Source	Mode of Transportation & Approx. Distance
1.	Clinker	1.90	0.95	2.85	JK Cement, Panna	~235 km Road
2.	Gypsum	0.10	0.05	0.15	Ujjwal Resources LLP	~ 1438 Km by road
3.	Fly ash	0.70	0.35	1.05	M/s Prayagraj Power	~ 150 Km By road

S. No.	Raw Material	Existing Quantity	Additional Quantity	Total	Source	Mode of Transportation & Approx. Distance
					Generation Company Ltd.	
4.	Slag	1.00	0.50	1.50	Open Market	~ 100 Km by road
5.	Any other (limestone)	0.1	0.05	0.15	Open Market	~ 300 Km by road

(i) Size or magnitude of operation

Details of the magnitude in terms of Capacity and Cost of the project are given in Table - 7 and Table 8, respectively:

Table 7 Size or Magnitude of Operation in terms of Capacity

S. No.	Particulars	Unit	Existing Installed Capacity	Additional Capacity	Total capacity after Expansion
1.	Cement (PPC/OPC/PSC/Composite Cement)	Million TPA	2.0	1.0	3.0
2.	D.G. Sets	KVA	1250	-	1250

Table 8 Size or Magnitude of Operation in terms of Cost

S. No.	Particular	Proposed Expansion Capacity
1.	Cost for the Expansion Project	Rs. 35.5 Crores
2.	Cost for Environment Protection Measures	Capital Cost: Rs. 86.0 Lakhs
		Recurring Cost: Rs. 39.2 Lakhs / annum

Table 9 Plant Area Breakup

S. No.	Particular	Existing Area (Ha)	Proposed Area (ha)	Total Area (ha)
1.	Plant Machinery and building	2.41	0	2.41
2.	Greenbelt & Plantation	3.5	0.378	3.878
3.	Office Building	0.183	0	0.183
4.	Road & Cement Area	2.4833	0.7022	3.1855
5.	Open Area	2.0847	0	2.0847
Total		**10.661**	**1.0802**	**11.7412**

v. STUDY AREA AT A GLANCE

The baseline information is collected for the identified study area, where project site is considered as the core zone and area within 10 km radius of the project site is considered as buffer zone. The study area for the project falls Village: Ingotha, Tehsil: Hamirpur, District: Hamirpur (Uttar Pradesh).

Environmental Settings within 10 km radius of the project site (i.e. study area) is given in Table below:

Table 10 Environment settings of study area

S.no.	Particulars	Description
1.	Nearest Village	Ingohta (1.5 Km in SW direction)
2.	Nearest Town & City	Town - Sumerpur (6.0 Km in NNE direction) City - Hamirpur (19.5 Km in North direction)
3.	Nearest National Highway / State Highway	NH - 34 (Dewas - Kanpur Nagar) (Adjacent Km in West direction)
4.	Nearest Railway station	• Ingohta Railway Station (1.0 Km in South direction) • Bharuwa Sumerpur Railway Station (7.5 Km in NE direction) • Ragaul Railway Station (9.0 Km in South direction)
5.	Nearest Airport	• Kanpur Airport (75 Km in NNE direction) • Chaudhary Charan Singh Internation Airport, Lucknow (133 Km in NE direction)
6.	National Parks, Wildlife Sanctuaries, Biosphere Reserves and Reserved Forest, Protected Forest within 10 km radius	There is No National Parks, Wildlife Sanctuaries, Biosphere Reserves and Reserved Forest, Protected Forest within 10 km radius.
7.	River / Water Body (within 10 km radius)	• Nallah (0.5 Km in NW direction) • Karoran Nala (5.5 Km in North direction) • Jhangra Nala (8.5 Km in SE direction) • Chandrawal River (9.0 Km in SE direction)
8.	Nearest CPA/SPA/ESA/ESZ	• There is no CPA/SPA/ESA/ESZ within 10 Km radius of the study area. • Nearest CPA - Jajmau, Kanpur (77 Km in NNE direction)
9.	Seismic Zone	Zone III [as per IS 1893 (Part-I): 2016]

Table 11 Brief Description of Nature, Size and Location of Project

S. No.	Particular	Detail
A.	**Nature of the Project**	Expansion Project
B.	**Size of the Project**	Cement (PPC/OPC/PSC/Composite Cement) - 2.0 to 3.0 Million TPA
C.	**Location Details**	
1.	Village	Ingohta
2.	Pargana	Sumerpur
3.	Tehsil & District	Hamirpur
4.	State	Uttar Pradesh
5.	Latitude	25°46'8.66"N to 25°46'16.04"N
6.	Longitude	80° 7'32.38"E to 80° 7'52.25"E
7.	SOI Toposheet No.	Core Zone- G44O1 (63C/1) Buffer Zone- G44O1 (63C/1), G44O2 (63C/2)

1.0 Plant Site Accessibility

The site is well connected to NH - 34 (Dewas - Kanpur Nagar) (adjacent in West direction). Nearest Town to the plant site is Town Sumerpur (~6.0 Km in NNE direction). Nearest Railway Station is Ingohta Railway Station (~1.0 Km in South direction) and nearest Airport is Kanpur Airport (~75 Km in NNE direction). The site is well connected with communication facilities like telephone, fax, wireless and telex and as such, no constraints are envisaged in this aspect as the Tehsil and District headquarters are near to the site.

1.1 Plant Site Layout

The existing plant area is 10.6610 ha and proposed expansion will be done within the existing plant premises only. However, company is additionally including the area of 1.0802 ha for greenbelt development and truck parking area. Thus, total plant area will be 11.7212 ha. No forest land is involved. Total Plant area i.e., 11.7412 ha is under the possession of the company and the land use is industrial type.

The land ownership documents are enclosed along with this EIA/EMP Report.

Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt development / plantation in accordance with CPCB guidelines and as per the Miyawaki Method of Plantation. Out of which; 2.0932 ha area (with 8000 Nos. of saplings) has already been developed. Further 3000 saplings will be planted on additional land for proposed expansion & gap filling will be done to maintain the density of 2500/ha.

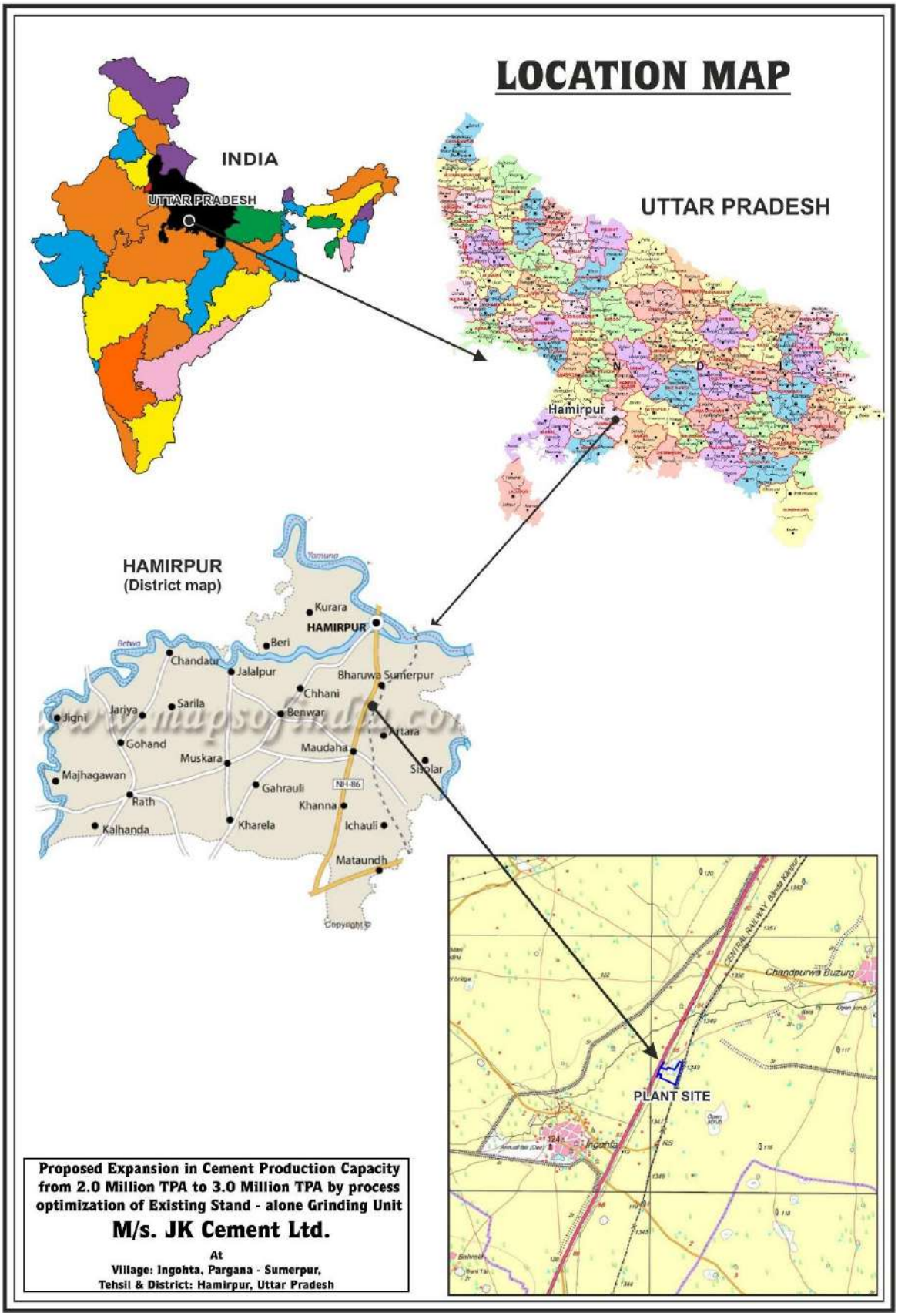

Figure 1 Location Map

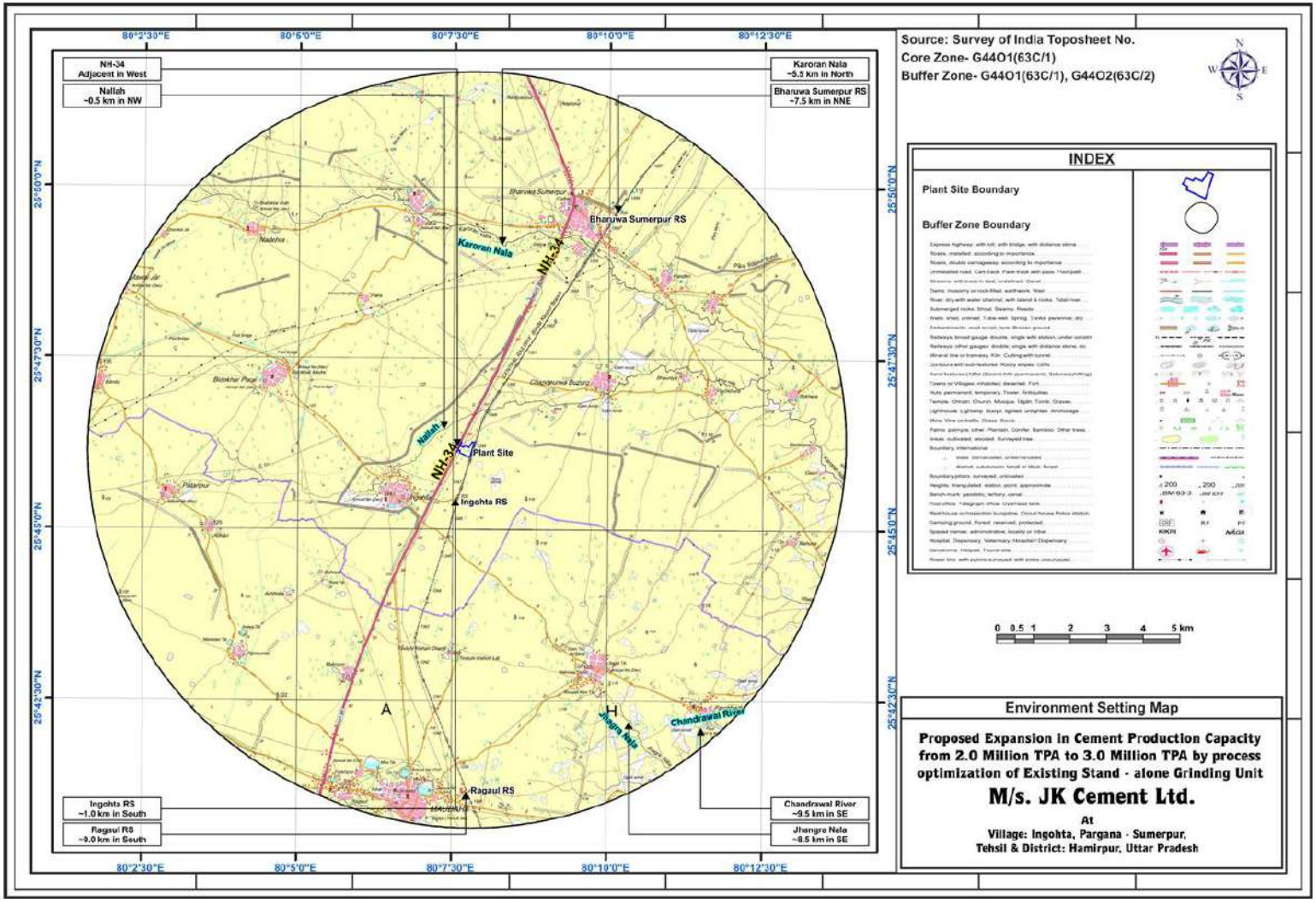

Figure 2 Environment setting of the study area

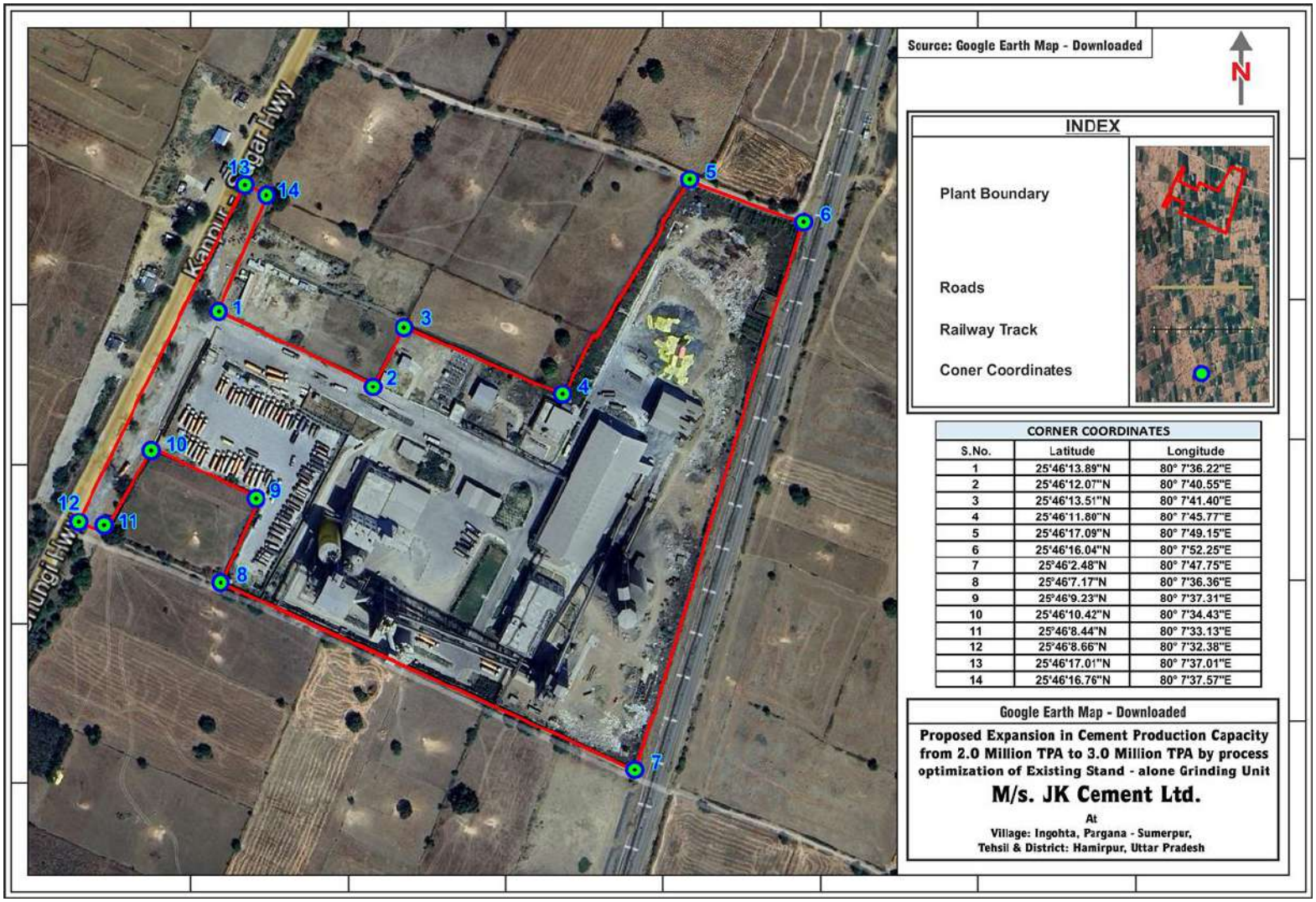

Figure 3 Corner coordinates of plant area

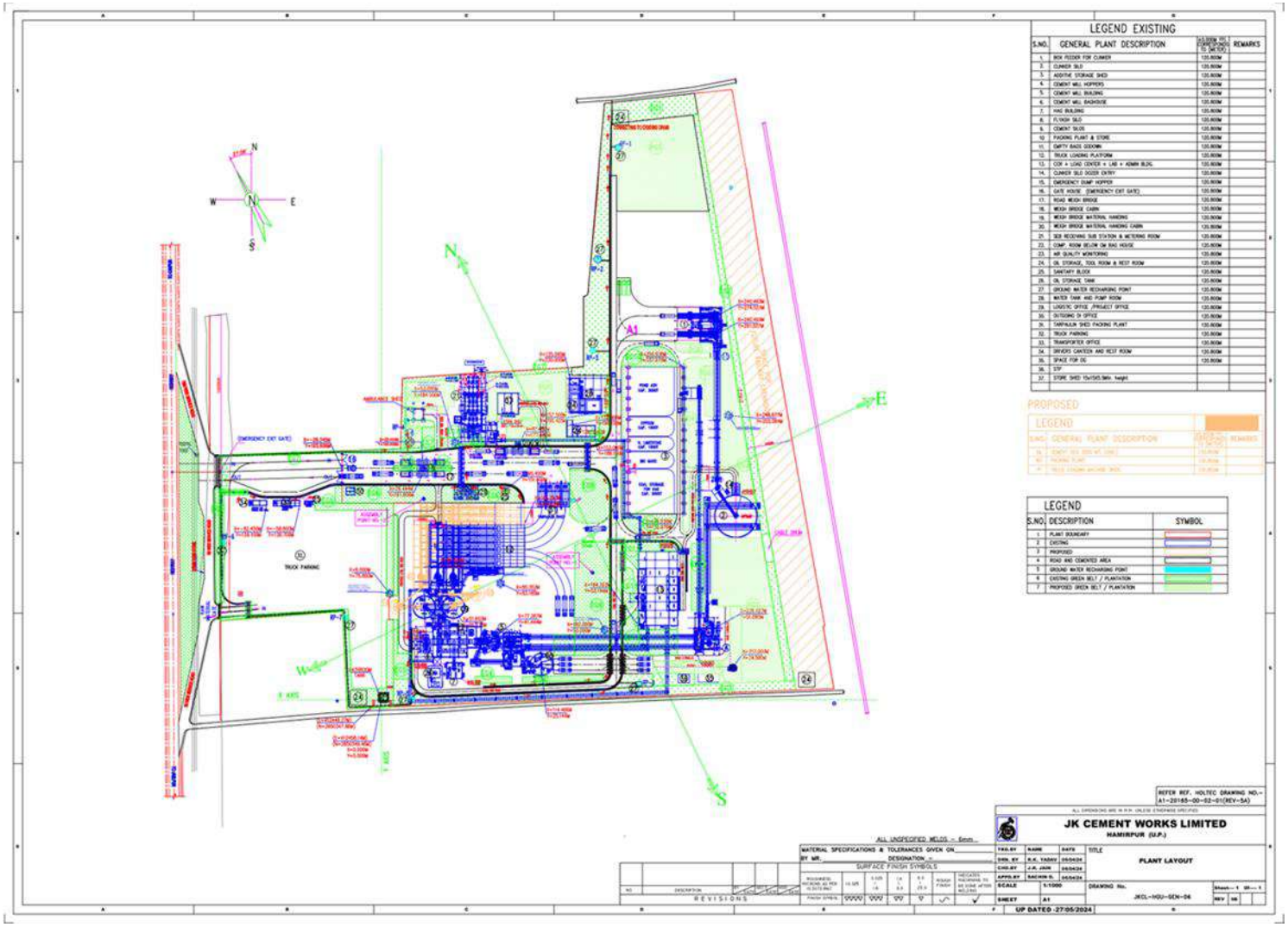

Figure 4 Plant site layout

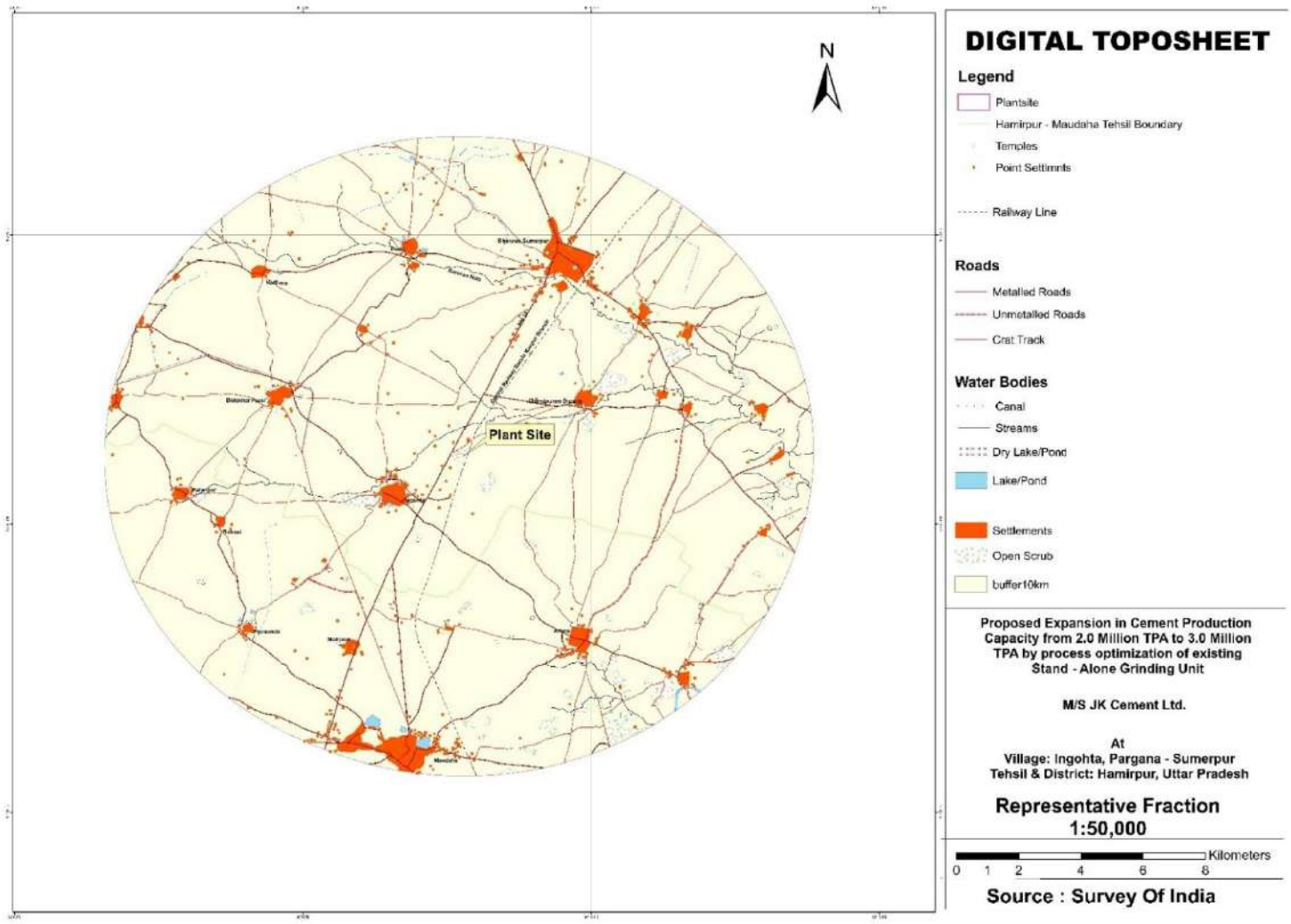

Figure 5 Digital toposheet of study area

	
Main Gate view of the Plant	**Greenbelt / Plantation inside the plant site**
	
Covered Belt Conveyor	**Clinker Silo**
	
Cement Mill along with Bag House	**Cement Mill (VRM)**
	
Greenbelt / Plantation inside the plant site	**Greenbelt /Plantation along the plant**

Site Preparatory Activities

Topography of the site is almost flat with an elevation of 139 to 144 m. As the expansion is being proposed with the process optimization no major site. Preparatory activities will be

involved in the proposed expansion. The present land use of the plant site is industrial; expansion will be done within existing plant premises; therefore, there will be no permanent change in land use, only intensity will increase due to expansion project.

☙ **Size or magnitude of operation**

Now, M/s. JK Cement Ltd. is proposing an expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand-alone Grinding Unit at Village: Ingohta Pargana- Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh.

Size and Magnitude of operation in terms of Capacity and Cost are given in Table -12 and Table – 13 respectively.

Table 12 Size or Magnitude of Operation in terms of Capacity

S. No.	Particulars	Unit	Existing Installed Capacity	Additional Capacity	Total capacity after Expansion
1.	Cement (PPC/OPC/PSC/Composite Cement)	Million TPA	2.0	1.0	3.0
2.	D.G. Sets	KVA	1250	-	1250

Source: Pre-Feasibility Report

Table 13 Size or Magnitude of Operation in terms of Cost

S. No.	Particular	Proposed Expansion Capacity
1.	Cost for the Expansion Project	Rs. 35.5 Crores
2.	Cost for Environment Protection Measures	Capital Cost: Rs. 86.0 Lakhs
		Recurring Cost: Rs. 39.2 Lakhs / annum

☙ **Major Facilities and Associated Activities Proposed**

The major facilities and associated activities proposed as a part of Expansion of Existing Stand-alone Grinding Unit are as given below:

Table 14 Major Facilities and Associated Activities

S. No.	Unit	Major facilities and associated activities proposed
1.	Grinding Unit (Existing)	– Cement Mill (VRM) – Hot Air Generator (HAG) based on Coal, Diesel, FO and Pyrolysis oil – Storage facilities for Raw material and Products (Covered Sheds, Silos) – Packing Plant – Truck Tipplers – Truck Parking Area
2.	D.G. Set	– Diesel Generator with storage of fuel
3.	Others	– Sewage Treatment Plant

vi. SCOPE OF WORK AND OBJECTIVES WILDLIFE CONSERVATION PLAN

As per direction under ToR, Preparation of Wildlife Conservation Plan for Schedule- I Species is mandatory. The objective of this plan is to address and alleviate the adverse effects caused by industrial activities and various other contributing factors. The 'Wildlife Conservation Plan' recognizes the rich biodiversity within the designated WCP area, which extends up to a 10-kilometer radius surrounding the core site, known as the buffer area. Collectively, these areas are referred to as the 'Wildlife Conservation Plan (WCP) area'. This comprehensive plan encompasses the assessment of habitat conditions, ecological dynamics, and the diverse range of plant and animal species within the study area.

There are various factors which tremendously affects the ecological systems such as urbanization, industrialization, illicit felling of trees, poaching, diseases, drought etc., which result in destruction of wildlife habitats (land, water, food), which further causes delimitation effect on the population of wildlife animals and degradation of the forest. To mitigate the impacts of plant related activities and other factors, Wildlife Conservation Plan for Schedule- I Species is necessary.

vii. LANDUSE LANDCOVER OF STUDY AREA

To study the land use pattern of the core as well buffer zone, land use/ land cover details have been identified/ maps have been prepared. The physical setting of study area shows a contrast of immense dimensions and reveals a variety of landscapes influenced by relief, climate, vegetation and economic use by man.

Satellite image has been procured from National Remote Sensing Centre, Hyderabad. Survey of India Toposheet as a reference map on 1:50,000 scale has been used for preparation of base layer data like road, rail network; village and project site and for geo-referencing of satellite image.

viii. LANDUSE LANDCOVER OF STUDY AREA

Objectives:

The objectives of the LULC study are as follows:

- To develop the Land use & Land cover map using land coordinates of the plant area (Core Zone) and 10 km radius from the plant site (Buffer area).
- To Identify and mark the important Land use and Land cover features using the primary and secondary data collected.
- To evaluate the impacts on existing land use/cover features of the buffer area by the proposed enhancement Project activities.
- To identify the mitigation measures for the sustainable use of land and to protect the buffer zone from the adverse impacts.

To study the land use pattern of the core as well buffer zone, land use/ land cover details have been identified/ maps have been prepared. The physical setting of study area shows a contrast of immense dimensions and reveals a variety of landscapes influenced by relief, climate, vegetation and economic use by man.

Satellite image has been procured from National Remote Sensing Centre, Hyderabad. Survey of India Toposheet as a reference map on 1:50,000 scale has been used for preparation of base

layer data like road, rail network; village and project site and for geo-referencing of satellite image.

Table 15 land use/land cover details of Core area

S. No.	Legend	Area (in ha)	% Area
1.	Agricultural land	30014.93	90.81
2.	Vegetation/Plantation	922.95	2.79
3.	Industry	191.23	0.58
4.	Open scrub/Waste land	361.78	1.09
5.	Road	336.54	1.02
6.	Surface water bodies	85.14	0.26
7.	Settlement	1097.66	3.32
8.	Railway Line	42.17	0.13
Total		**33053.41**	**100.00**

Table 16 land use/ land cover details of Buffer area

S. No.	Legend	Area (in ha)	% Area
1.	Agricultural land	33.92	68.17
2.	Industry	11.72	23.54
3.	Vegetation/Plantation	1.77	3.56
4.	Roads	1.27	2.57
5.	Settlement	0.06	0.12
6.	Railway Line	1.02	2.04
Total		**49.76**	**100**

INTERPRETATION AND CONCLUSION:

For study area-

- The 10 km radius study area mainly comprises of Agricultural land (90.81%) followed by Settlement (3.32%).
- Vegetation/Plantation occupies 922.95 ha., making up 2.79%; Open Scrub/Waste Land encompasses 361.78 ha., comprising 1.09%; Agriculture Land spans 30014.93 ha., representing 90.81%; Settlement covers 1097.66 ha., accounting for 3.32%; Surface Water Bodies occupy 85.14 ha., making up 0.26 %;Road covers 336.54ha., representing 1.02%; Railway Line spans 42.17 ha., accounting for 0.13%; of the total area, which sums up to 33052.41 ha., representing 100% of the area.
- The settlements and agriculture land cover 3.32% and 90.81%of the region's area, which implies that the region has a low to medium population density and high agricultural activity. The Open Scrub/Waste land covers 1.09% of the region's area, which indicates that the region has a less amount of unused or degraded land.

For core area-

- The core area mainly comprises of Agricultural land (68.17%) followed by industry (23.54%).
- Vegetation/Plantation occupies 1.77 ha., making up 3.56%; Agriculture Land spans 33.92ha., representing 68.17%; Settlement covers 0.06ha., accounting for 0.12%; Road covers 1.27ha.,

representing 2.57%; Railway Line spans 1.02ha., accounting for 2.04 %; of the total area, which sums up to 49.76 ha., representing 100% of the area.

- The agriculture land cover 68.17% of the area, which implies that the region has a medium to high agricultural activity.

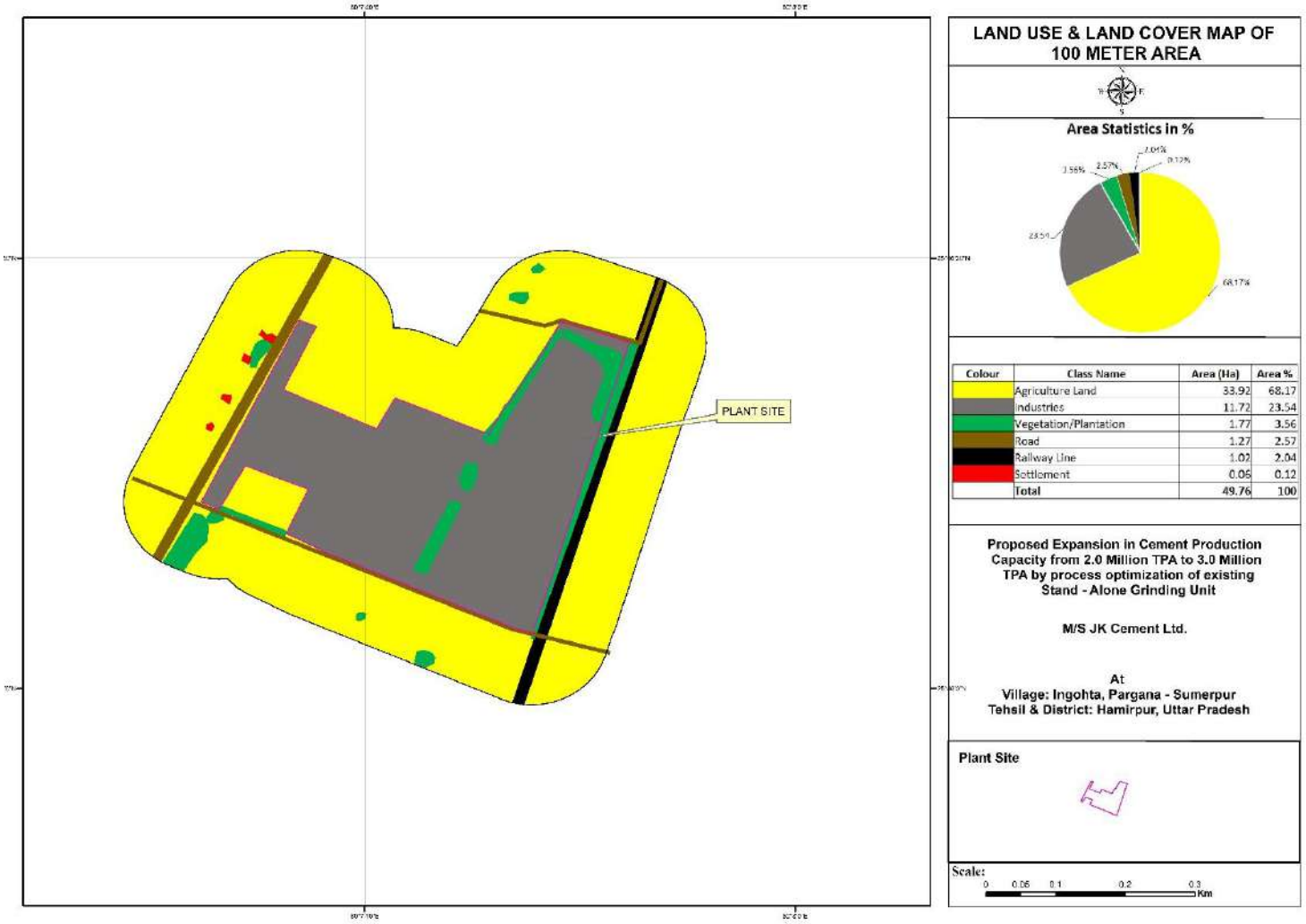

Figure 6 Land use/ land cover details of core area

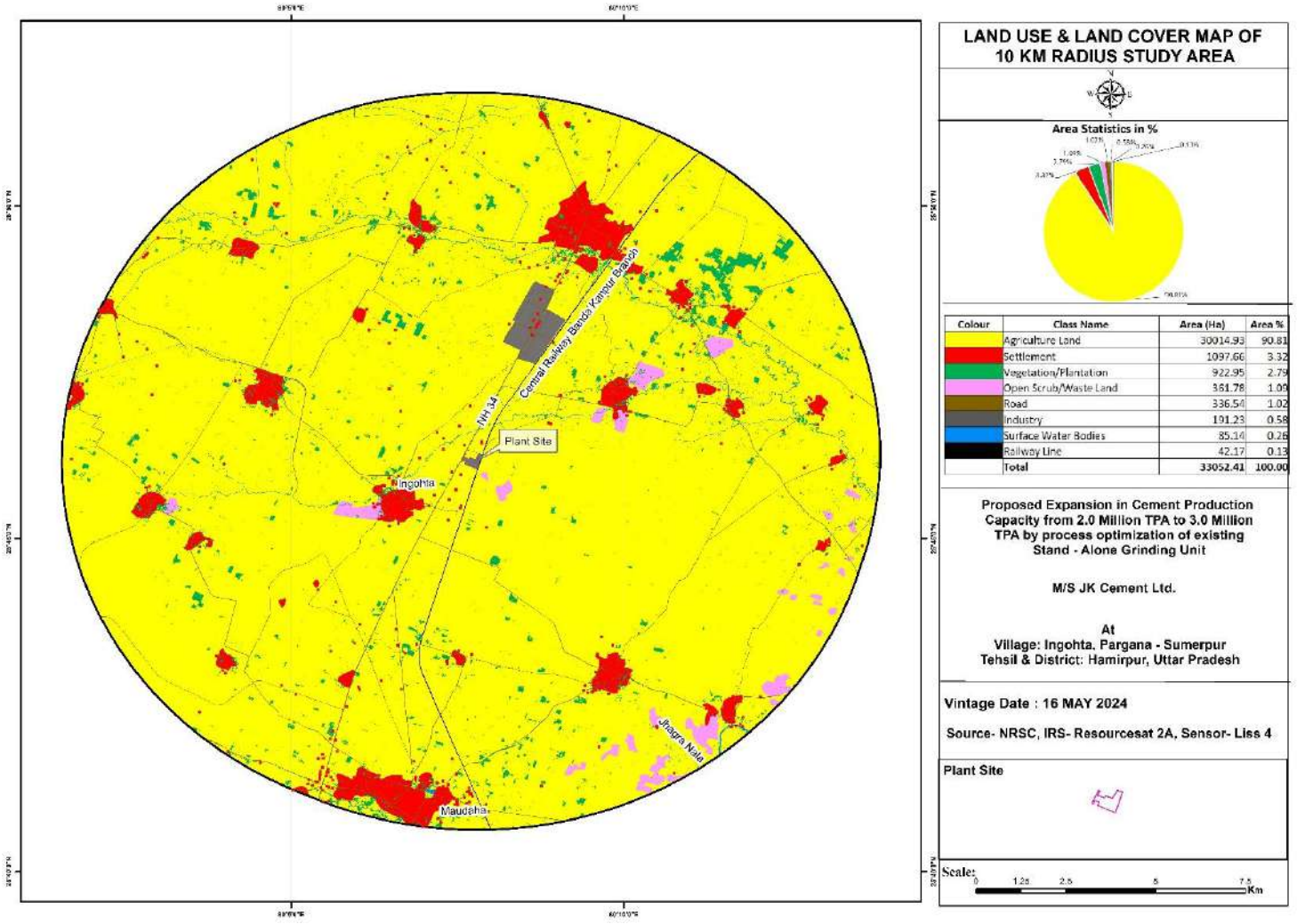

Figure 7 Land use/ Land cover details of study area

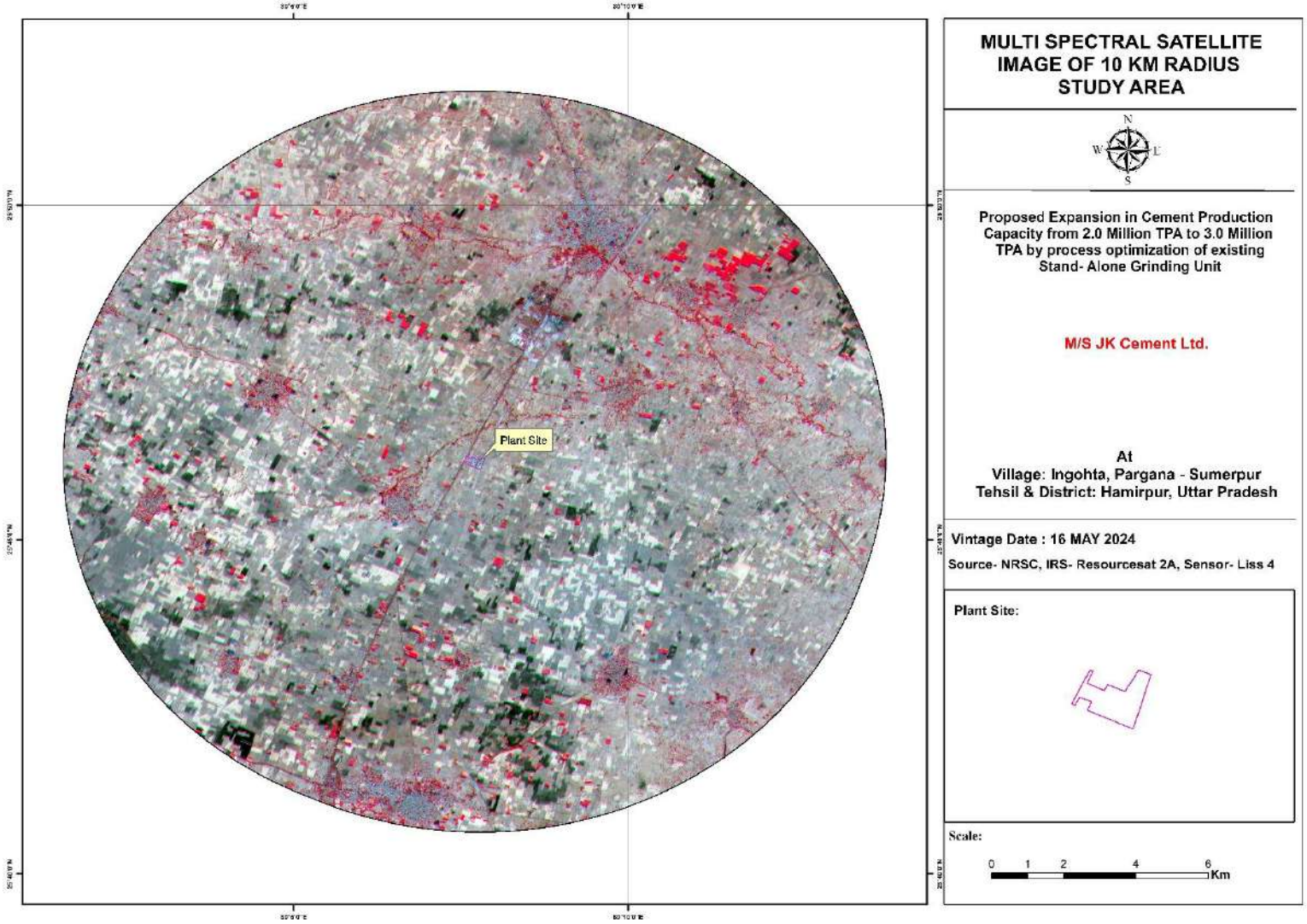

Figure 8 Multispectral image of 10 km of study area

ix. PROVISIONS OF ALL RELEVANT ACTS AND REGULATIONS APPLICABLE TO THE WCP AREA

LEGAL FRAMEWORK

India, as a matter of policy, upholds and promotes cement, mining, electricity, energy, chemical and other developmental projects on the condition that they align with the country's biological, physical, chemical, and social environment. Recognizing its status as one of the world's most biodiverse nations and as a signatory to various international conventions and treaties, India is committed to conserving its biodiversity, preserving natural habitats, and safeguarding migratory species. To this end, a robust legal framework comprising acts, laws, rules, and regulations is in place.

Any activities or impacts that pose unmanageable or adverse consequences to the country's flora, fauna, and overall biodiversity are strictly prohibited and regulated by the following acts and regulatory authorities:

S. No.	Guidelines/ Rules/ Acts
1.	The Environment (Protection) Act, 1986 and its subsequent amendments.
2.	The Air (Prevention and Control of Pollution) Act, 1981 and its subsequent amendments.
3.	The Water (Prevention and Control of Pollution) Act, 1974 and its subsequent amendments.
4.	The Wildlife (Protection) Act, 1972 and Wildlife (Protection) Amendment Act, 2022 its subsequent
5.	EIA Notification, 2006 dated 14th September, 2006 and its subsequent amendments.
6.	Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 and its
7.	E-Waste (Management) Rules, 2016 and 2022 and its subsequent amendments.
8.	Bio-medical Waste Management Rules, 2016 and its subsequent amendments.
9.	The Battery (Management & Handing) Rules, 2022 and its subsequent amendments.
10.	Plastic Waste Management Rules, 2016 and Plastic Waste Management (Amendment) Rules, 2022
11.	Solid Waste Management Rules, 2016 and its subsequent amendments
12.	The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (MSIHC Rules) and its
13.	The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996 and its
14.	Construction and Demolition Waste Management Rules, 2016 and its subsequent amendments.
15.	The Noise pollution (Regulation and Control) Rules, 2000 and its subsequent amendments.
16.	The Public Liability Insurance Act 1991 & Rule 1991 and its subsequent amendments.
17.	Corporate Responsibility for Environmental Protection (CREP) Guidelines, 2003 and its subsequent
18.	Latest notifications/ guidelines issued by Central Ground Water Authority (CGWA) and its
19.	Guidelines for Developing Greenbelts, March 2000 and its amendments
20.	Compliance of Extended Producer Responsibilities (EPR)
21.	Basel Convention and Transboundary rule - 1989
22.	Green Credit Rules, 2023
23.	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006
24.	Van (Sankashan Evam Samvardhan) Adhiniyam, 1980.

☙ ENVIRONMENT PROTECTION ACT, 1986

The Environment Protection Act of 1986 is a crucial law in India that aims to safeguard the environment. It establishes standards for pollution control, mandates environmental impact assessments for projects, and regulates hazardous substances. The act enforces penalties for violations and promotes sustainable development for a healthier environment. The Ministry of

Environment, Forests and Climate Change (MoEFCC, GoI) is responsible for the implementation and enforcement of the Environment (Protection) Act, 1986 and Environment Protection Rules, 1986 framed under the Act under Sections 6 and 25 of the EP Act, 1986.

- **CENTRAL POLLUTION CONTROL BOARD**

The Central Pollution Control Board (CPCB) was constituted in September 1974, under Section 3 of the Water(Prevention and Control of Pollution) Act, 1974, for the purpose of implementing the provisions enshrined inthe Water (Prevention and Control of Pollution) Act, 1974. The executive responsibilities for the industrial pollution prevention and control are primarily executed by the CPCB at the Central level, which is a statutory body, attached to the MoEFCC, GoI. The CPCB works towards control of water, air, noise pollution, land degradation, hazardous substances and waste management.

- **BIOLOGICAL DIVERSITY ACT, 2002**

The Biological Diversity Act of 2002 in India aims to conserve and sustainably use the country's biological diversity. It establishes regulations for access to biological resources, promotes community participation, and ensures the fair sharing of benefits. The act also designates Biodiversity Heritage Sites for protection.

- **INDIAN FOREST ACT, 1927**

The Indian Forest Act, 1927 is comprehensive legislation relating to forest management in the country. Its main objective is to consolidate the pre-existing laws relating to forests, the transit of forest produce, and the duty leviable on the timber and other forest produce. The Act also made the conservation of forest and Wildlife more accountable.

The Act has also defined the procedures to be followed in declaring reserve, protected, or village forests. Further, the Act has prohibited, grazing of cattle, felling of trees, fishing, quarrying, use of forest products, and hunting in these forests.

- **FOREST CONSERVATION ACT, 1980**

The Act was enacted to provide the protection and improvement of the environment as a whole. It also empowered the central government to establish suitable authorities for preventing environmental pollution in all forms and to resolve environmental problems arising within the country.

- **WILDLIFE (PROTECTION) ACT, 1972**

The Wildlife (Protection) Act of 1972 is a crucial legislation in India aimed at safeguarding wildlife and their habitats. The act was enacted to address the alarming decline in wildlife populations due to habitat destruction, poaching, and illegal trade. It prohibits hunting and trade of endangered species, establishes protected areas, and imposes penalties for offenses. The act plays a key role in conserving India's diverse wildlife and promoting sustainable management.

- **THE WILDLIFE (PROTECTION) AMENDMENT ACT, 2022**

The Government of India enacted The Wildlife (Protection) Amendment Act, 2022 for protection of Endangered Species: Act seeks to enhance punishment for illegal Wildlife trade. Better Management of Protected Areas: It provides for certain permitted activities like grazing or movement of livestock and Bonafide use of drinking and household water by local communities. Protection of Forest Lands: It is so critical because it equally inculcates in itself the protection of rights of the people who have been residing there since ages.

x. DESCRIPTION OF FOREST AND HABITAT CONDITION, WILDLIFE SCENARIO OF THE STUDY AREA:

Uttar Pradesh largely consist of fertile Gangetic plains in the Northern part of the country. The major rivers flowing through the State are the Ganga, the Yamuna, the Ramganga, the Gomti and the Ghaghra. The terai and bhabhar area in the Gangetic Plain have most of the forests while the Vindhyan forests consists mostly of scrub.

The existing flora in Uttar Pradesh can be classified into three categories-

1. Wet tropical deciduous forests.
2. Dry tropical deciduous forests.
3. Tropical thorny forests.

On the Shivalik foothills and in the terai-bhabhar area grow the sal and gigantic haldu. Along river courses the shisham grows in abundance. The Vindhyan forests have dhak, teak, mahua, salai, chironji and tendu. Shesham is mostly used for furniture while khair yields kattha, which is taken with betel leaves or pan. Semal and gutel are used as matchwood and kanju in the plywood industry. Babul provides the principal tanning material of the state. Some of the grasses such as baib and bamboo are raw material for the paper industry. Tendu leaves are used in making bidis (Indian cigarettes), and cane is used in baskets and furniture.

Species of grasses have been collected from the Gangetic plain. Herbs include medicinal plants like Rauwolfia serpentina, Viala serpens, podophyllum, hexandrum and Ephecra gerardiana. Corresponding to its variegated topography and climate, the state has a wealth of animal life. Its avifauna is among the richest in the country. **Animals** that can be found here include the tiger, leopard, wild boar, sloth bear, chital, sambhar, blackbuck, barking deer, hog deer, swamp deer, jackal, hyena, porcupine, jungle cat, hare, squirrel, monitor lizards, fox etc. Other animals in the state include reptiles such as lizards, cobras, kraits, and gharials. Among the wide variety of fishes, the most common ones are mahaseer and trout. Certain species are found in special habitats. The elephant is confined to the terai and the foothills.

The ***Chinkara*** and the ***Sandgrouse*** prefer a dry climate, and are native to the Vindhyan forests. ***Rhinoceros*** rehabilitation program is on in the terai forest of Dudhwa.

Crocodile & Gharial have also started growing in numbers because of different conservation initiatives taken by the Wildlife department of Uttar Pradesh.

The most common birds include the crow, pigeon, dove, jungle fowl, black partridge, house sparrow, peafowl, blue jay, parakeet, kite, snipes, comb ducks, mynah, quail, bulbul, kingfisher and woodpecker.

Besides large numbers of migratory birds visit different bird areas of the state. On 9 August 2019, 220 million trees were planted in Uttar Pradesh with the vision of increasing green area, conserving forest area and its animals. Planting was carried out in 1,430,381 places, including 60,000 villages and 83,000 sites in forest ranges.

Table 17 FOREST COVER DETAILS OF UTTAR PRADESH AND HAMIRPUR

Types of forests	Forest cover of Uttar Pradesh	Forest cover of Hamirpur
Very dense forest	2626.61	0
Moderately dense forest	4029.37	80
Open forest	8161.91	147
Total	**14817.89**	**227**
Scrubs	563.38	14

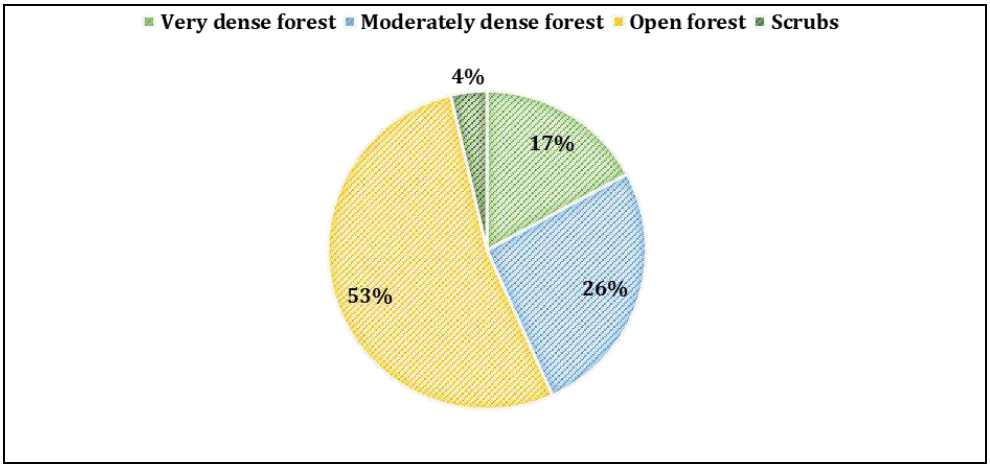

Figure 9 Forest cover details of Uttar Pradesh

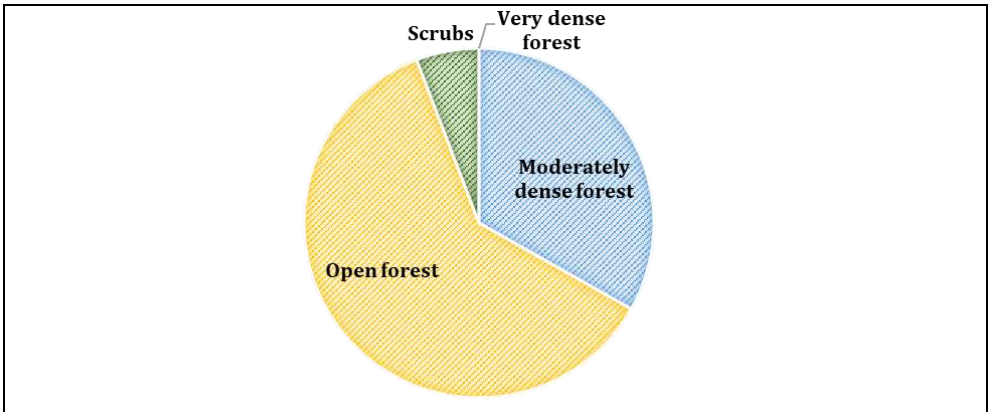

Figure 10 Forest cover details of Hamirpur

Figure 11 Forest details of Uttar Pradesh

Strategies for forest development –

There are several mitigation measures and policies adopted by Uttar Pradesh Government and other organizations to protect forests, habitation and wildlife. Some of them are as follows: -

- **Social forestry scheme**

This is a major scheme funded by State Government for tree plantation. Plantations is carried out on various type of community land, canals, rail, and on land available on road side to ensure the availability of timber, fuel wood, fodder, small forest produce etc., in rural areas of all the districts in the state. This ensures the availability of raw material for small timber industries for rural people. The scheme is being implemented in the following manner on the basis of financial sources.

- Green belt development scheme
- National afforestation programme
- Uttar Pradesh participatory forest management and poverty alleviation project
- Bamboo mission
- Green India Mission
- Project Tiger
- Project Elephant
- Lion Breeding Programmes, Etowah
- Integrated Development of Wildlife Habitat
- National Plan for Conservation of Aquatic Ecosystem

Source- https://www.phytojournal.com/archives/2019/vol8issue4/PartAN/8-4-104-597.pdf

A. STUDY AREA PROFILE

Hamirpur district is a part of Chitrakoot Dham Division of Uttar Pradesh state of India. Hamirpur town is the district headquarters. It consists of Four Tehsil namely Hamirpur, Maudaha, Rath,Sarila and Seven Blocks namely Gohand, Kurara, Maudaha, Muskara, Rath, Sarila, Sumerpur. Hamirpur district lies between Lattitude 25.7913° N and Longitude 80.0088° E. Hamirpur is bounded by districts Jalaun (Orai), Kanpur and Fatehpur in north, Banda in east, Mahoba in south and Districts of Jhansi and Jalaun on the West.

The district occupies an area of 4,121.9 km^2. The district has a population of 1,042,374 (2001 census). As of 2011 it is the third least populous district of Uttar Pradesh (out of 71), after Mahoba and Chitrakoot. Two major rivers Yamuna and Betwa meet here. On the banks of river Betwa lies the "Coarse sand" which is exported to many parts in Uttar Pradesh.

- **Yamuna Pathway**

Hamirpur is situated between Yamuna and Betwa river. The Yamuna Pathway is the centre of attraction for people in the morning and evening. The reason for this is that there are hundreds of colourful exotic birds here, which force people to stand unintentionally. People are enjoying it by standing silently for hours watching the birds chirping and playing in the water of Yamuna. In the winter season, the temperature goes up to -30 degrees in the Siberian province of Russia. For this reason, the birds here move to less cold countries like India. Hundreds of such migratory birds also reach the Yamuna Pathway. Among them are rare and on the verge of extinction Siberian duck, goose, teal, China duck, red and black head birds are also there. The beautiful view of sunrise and sunset in the morning and evening from the Yamuna Pathway is worth seeing.

- **Climate and rainfall**

The climate is typical subtropical, characterized by prolonged summer, mild winter and moderately heavy rain fall during monsoon season. About 90% of which received from south west monsoon. May is hottest month with temperature. 470C January is usually coldest month with the temperature 2.60C. The relative humidity is highest south west monsoon ranging between 70% to 80% with lowest around 40% during peak summer month of April & May.

Table 18 Rainfall data of last 10 years

S. no.	Normal (mm)	Actual (mm)
2013	825.6	1089.66
2014	825.6	485.71
2015	825.6	502.41
2016	825.6	918.66
2017	825.6	446.61
2018	825.6	844.91
2019	825.6	983.18
2020	825.6	608.96
2021	825.6	787.96
2022	825.6	941.73
2023	825.6	810.11

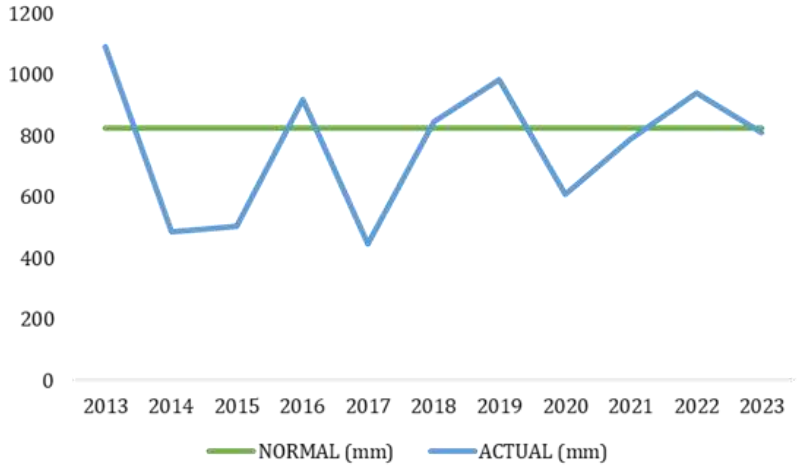

Figure 12 Graphical representation of rainfall data

- **Temperature:**

  The climate of Uttar Pradesh is generally defined as tropical monsoon type.

  UP has the following three predominant seasons:

- **Winter Season** - November to February
- **Summer Season** - March, April and May
- **South-west Monsoon** - June, July, August, September and October

  Retreating Monsoon season, although existent, has a very negligible effect in Uttar Pradesh and only occasional mild showers are experienced in winter. Some of these showers are not even due to the Monsoon but due to western disturbances.

  The primary temperature, rainfall and wind features of the three Distinct Seasons of U.P. can be summarized as below:

- **Summer (March–June):** Hot & dry (temperatures rise to 45°C, sometimes 47-48°C); low relative humidity (20%); dust laden winds.
- **Monsoon (June–September):** 85% of average annual rainfall of 990mm. Fall in temperature 40-45° on rainy days.
- **Winter (October–February):** Cold (temperatures drop to 3-4°C, sometimes below -1°C); clear skies; foggy conditions in some tracts.

ꕥ **GEOGRAPHY**

- **Location, Boundaries:**

  The district lies between Latitude 25.7913° N and Longitude 80.0088° E including Mahoba district. Hamirpur is bounded by districts Jalaun (Orai), Kanpur and Fatehpur in north, Banda in east, Mahoba in south and Districts of Jhansi and Jalaun on the West.

- **Hills:**

  In the south numerous outcrops of gneiss rocks, tending to cluster into low ranges. surrounded by uneven broken tracts and covered for the most part with stunted jungle are succeeded by a more

level tract in which the hills grow sparser. Now approximately all hill area has come under newly created district-Mahobha.

- **Rivers:**

  Yamuna: This river forms north boundry of the district. The river first touches the district at the village Haraulipur in tehsil Hamirpur, where it forms a sudden loop. Flowing then east to Jamrehi Tir, it curves abruptly south to Sikrohi and then continues south-east part Hamirpur to Baragaon where the Betwa joins it.Its length in Hamirpur district is approximately 56 km. Betwa : This river flows along the north-western border of the District from the point where the Dhasan joins it to the village of Kuprat separating tehsil Rath from district Jalaun. It enters the district near the village of Beri and flows separating tehsils Rath and Maudaha from tehsil Hamirpur. Its length in Hamirpur district is approximately 65 km. Other rivers lying in the district are Dhasaan, Barma, Ken, Chndraval and Pandwaha. These rivers are used for irrigation purpose. A dam named Swami Bramhananad Dam (Moudaha Dam) has been constructed on the river Barma.

- **Seismicity:**

  No earthquake has been observed in the district during last 200 years. The district has, however experienced on a few occasions' earthquakes originating in the Himalayan boundary fault zone., Moradabad fault and Narmada Tapti fault zones.

  Climate:

  The Climate of the district is characterized by an intensely hot summer, a pleasant cold season. The summer season from March to about middle of June is followed by the south-west monsoon season from mid-June to the end of September. October and first half of November constitute the post-monsoon period. The cold season is from mid-November to February.

- **Kalpa Vriksha**

  A rare ancient and mythical Kalpa Vriksha is situated on the banks of river Yamuna near Gayatri Tapo Bhoomi at the headquarters of Hamirpur city. The height of this tree is not very high, but its diameter is quite large. In the month of September, it bears large white flowers. This rare tree has a medicinal value from the point of view of Ayurveda. This tree originated in the forest of Africa, and it is found somewhere in India. It is also called as Kalpadruma and is a godly tree in Hinduism. The kalpavriksha was born during the churning of the ocean according to the Hindu tradition or Samudra Manthan. The wish rewarding cow kamadhenu was born along with the tree. The tree was then taken to heaven by Lord Indra and planted it over there. According to the Hindu tradition, there are five kalpa vrikshas, the Mandana, Santana, kalpavrikhsa, parijata and harichandana. They fulfilled the wishes of the Gods and out of hate and jealousy, the demons struck wars with them.

- **AGRICULTURE**

  Land Soil:

  The soils consist of the well-known Bundelkhand varieties, Mar, Kabar, Parua and Rakar. Mar is often called black cotton soil. It varies greatly in colour. It contains small lumps of kankar. Kabar range from a rich dark black to light brown. Its chief characteristics is its extreme adhesiveness,

which causes it to quickly dry and cake in to hard blocks. Parua is a light-coloured sandy soil, found in many forms. It is usually less rich in organic matter, but its finer texture makes it more responsive to manure and irrigation. Raker is refuse soil which occurs on sloping ground, where the action of water has tended to denude the earth of all its better qualities.

- **Irrigation:**

  Only 27.7% land are irrigated land in Hamirpur. The distribution of area of land irrigated by different sources of irrigation are as under. Canals are the main source of irrigation and are constructed by the different rivers like Yamuna, Betwa, Dashan, Barma, Ken, Chandrawal and Pandwaha.

- **Crops:**

  There are three harvests, the autumn or Kharif have usually known as siyari, and the spring or Rabi as Unhari. The Ziad or extra harvest is insignificant in this area. Gram, Wheat, Barley, Peas, Arhar and Masoor are the main crops of Rabi. Jwar, Rice, Bajra, Urd, Moong and Moth are the main crops of Kharif. Melon, water-melon, bitter guard, pumpkin are the main crops of Zaid.

  Source-https://hamirpur.nic.in/about-district/

xi. DESCRIPTION OF FLORA AND FAUNA OF THE WCP AREA SHOWING THE DETAILS OR HABITAT CONDITION, WILDLIFE SCENARIO OF THE ENDEMIC, THREATENED AND SCHEDULED SPECIES:

Understanding these impacts is vital for developing effective mitigation strategies that aim to minimize harm to biodiversity and promote ecological resilience. This report focuses on the assessment of biodiversity within 10 km radius study area of the project site and explores the potential impacts arising from the project activities. Furthermore, it aims to propose mitigation measures that can help conserve and protect biodiversity, ensuring the sustainable coexistence of the project and the surrounding natural environment.

Objectives of the Study

The primary objective of the current study is to conduct an observation, documentation, and evaluation of the environmental impact within a 10 km radius study area of the project site. The survey conducted also focuses on describing the terrestrial and aquatic flora and fauna, with particular emphasis on identifying and studying Rare, Endangered, and Threatened species in the study area.

The present study was undertaken with the following objectives:

- To Carry out Primary field survey of flora and fauna and ecologically sensitive natural habitats in the study area.
- To understand the spectrum of domesticated and wild biodiversity of the study area.
- To study the likely impacts of the proposed project on the local biodiversity, and to suggest mitigation measure, if required, for threatened biota.
- To assess the nature and distribution of vegetation (Terrestrial and Aquatic) in and around the Project area.

To enumerate Endemic, Rare, Endangered and Threatened (RET Species), separately for core and buffer area, based on primary field surveys and clearly indicating the Schedule of fauna present as per Wildlife Protection Act, 1972 and amendment in The Wildlife (Protection) Amendment Act, 2022. In case any Scheduled- I fauna occur in the study area, the conservation plan along with budgetary provisions for their conservation is to be prepared in consultation with the State Forest and Wildlife Department.

Inventorization of Flora

List of flora observed in the study area 10 km radius from the boundary of project site and the secondary data including the core zone is mentioned in the list below: -

Table 19 Inventory of Floral Diversity in Core & Buffer Zone in 10 km radius of Existing Plant Site

Based on Actual Sighting, based on inputs from locals and Perused from Secondary Data

S.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation
Trees						
1.	*Acacia nilotica*	Babool	Fabaceae	+	+	LC
2.	*Acacia catechu*	Khair	Fabaceae	-	+	LC
3.	*Azadirachta indica*	Neem	Meliaceae	+	+	LC
4.	*Aegle marmelos*	Bel	Rutaceae	-	+	NT
5.	*Caryota mitis*	Fish tail palm	Arecaceae	-	+	LC
6.	*Cassia siamea*	Kassod	Fabaceae	+	+	LC
7.	*Cassia fistula*	Amaltash	Fabaceae	-	+	LC
8.	*Dalbergia sissoo*	Shesham	Fabaceae	-	+	LC
9.	*Ficus religiosa*	Pipal	Moraceae	+	+	LC
10.	*Ficus glomerata*	Gular	Moraceae	-	+	LC
11.	*Ficus virens*	pakod	Moraceae	-	+	LC
12.	*Grevillea robusta*	Silver -oak	Protaceae	-	+	LC
13.	*Leucaena leucocephala*	Subabul	Fabaceae	-	+	DD
14.	*Mangifera indica*	Aam	Anacardiaceae	-	+	DD
15.	*Mitragyna parviflora*	Kadam	Rubiaceae	-	+	NA
16.	*Mallotus philippensis*	Rohini	Euphorbiaceae	-	+	LC
17.	*Murraya koenigii*	Curry Patta	Rutaceae	-	+	LC
18.	*Pinus roxburghi*	Chir	Pinaceae	-	+	LC
19.	*Polyalthia longifolia*	Ashok	Annonaceae	+	+	NA
20.	*Delonix regia*	Gulmohar	Fabaceae	-	+	LC
21.	*Eucalyptus globulus*	Safeda	Myrtaceae	-	+	LC
22.	*Emblica officinalis*	Amla	Phyllanthaceae	-	+	NA
23.	*Phoenix sylvestris*	Khajoor	Arecaceae	-	+	NA
24.	*Prosopis juliflora*	Vilayati	Mimosaceae	+	+	LC
25.	*Toona sinensis*	Toon	Meliaceae	-	+	LC
26.	*Tectona grandis*	Sagwan	Lamiaceae	-	+	EN
27.	*Terminalia arjuna*	Arjun	Combretaceae	-	+	NA
28.	*Terminalia belerica*	Bahera	Combretaceae	-	+	LC
29.	*Terminalia chebula*	Harer	Combretaceae	-	+	LC
30.	*Tamaridus indica*	Imli	Fabaceae	-	+	LC
31.	*Pterocarpus*	Beejasal	Fabaceae	-	+	NT

S.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation
32.	*Syzygium cumini*	Jamun	Myrtaceae	-	+	LC
33.	*Schleichera oleosa*	Kusum	Sapindaceae	-	+	LC
34.	*Shorea robusta*	Sakhu	Dipterocarpaceae	-	+	LC
35.	*Ziziphus mauritiana*	Ber	Rhamnaceae	-	+	LC
Shrubs						
36.	*Adhatoda vasica*	Adusa	Acanthaceae	-	+	NA
37.	*Callistemon*	Bottle brush	Myrtaceae	-	+	NA
38.	*Carissa carandas*	Karonda	Apocynaceae	-	+	NA
39.	*Ipomoea carnea*	Behaya	Convolvulaceae	-	+	NA
40.	*Nerium oleander*	Kaner	Apocynaceae	-	+	LC
41.	*Ricinus communis*	Arandi	Euphorbiaceae	-	+	NA
42.	*Calotropis procera*	Aak	Asclepiadaceae	-	+	LC
43.	*Carica papaya*	Papaya	Caricaceae	-	+	DD
44.	*Ziziphus nummularia*	Jharberi	Rhamnaceae	-	+	NA
45.	*Jasminum polyanthum*	Chamali	Oleaceae	-	+	NA
46.	*Plumeria alba*	Champa	Apocynaceae	-	+	LC
47.	*Psidium guajava*	Amrud	Myrtaceae	-	+	LC
48.	*Citrus limon*	lemon	Rutaceae	-	+	LC
49.	*Tagetes minuta*	Marigold	Asteraceae	-	+	NA
50.	*Tecoma gaudichaudi*	Yellow Bell	Bignoniaceae	-	+	NA
51.	*Tephrosia villosa*	Sarapunkha	Fabaceae	-	+	LC
Herbs and Climbers						
52.	*Aerva tomentosa*	Bui	Amaranthaceae	-	+	NA
53.	*Agave angustifolia*	Caribben	Asparagaceae	-	+	NA
54.	*Amaranthus spin osus*	Jangli chaulai	Amaranthaceae	-	+	NA
55.	*Achyranthes aspera*	Latjira	Amaranthaceae	+	+	NA
56.	*Acalypha indica*	Muktajhuri	Euphorbiaceae	+	+	NA
57.	*Adhatoda vasica*	Vasaka	Acanthaceae	-	+	LC
58.	*Boerhavia diffusa*	Punarnava	Nyctaginaceae	-	+	NA
59.	*Bacopa monnieri*	Brahmi	Plantaginaceae	-	+	LC
60.	*Cannabis sativa*	Bhung	Cannabaceae	-	+	NA
61.	*Celosia argentea*	Survali	Amaranthaceae	-	+	LC
62.	*Cleome gynandra*	Safed hulhul	Cleomaceae	-	+	NA
63.	*Commelina forskaolii*	Kankus	Commelinaceae	-	+	NA
64.	*Ocimum gratissimum*	Ban Tulsi	Lamiaceae	+	+	NA
65.	*Cucumis melo ssp.*	Kachari	Cucurbitaceae	+	+	NA
66.	*Datura metel*	Dhatura	Solanaceae	-	+	NA
67.	*Digera muricata*	Latmahuria	Amaranthaceae	-	+	NA
68.	*Echinops echinatus*	Unthkanta	Asteraceae	-	+	NA
69.	*Polycarpaea*	Oldman'S	Caryophyllaceae	-	+	NA
70.	*Sida rhombifolia*	Khareti	Malvaceae	+	+	NA
71.	*Sesamum indicum*	Til	Pedaliceae	+	+	NA
72.	*Thevetia peruviana*	Peeli Kaner	Apocynaceae	-	+	VU
73.	*Euphorbia hirta*	Badi Dudhi	Euphorbiaceae	-	+	NA
74.	*Helianthus annuus*	Sunflower	Asteraceae	-	+	LC
75.	*Indigofera cordifolia*	Gokhru	Fabaceae	-	+	NA

S.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation
76.	*Lantana camara*	Raimuniya	Verbenaceae	+	+	NA
77.	*Mollugo pentaphylla*	Jharasi	Molluginaceae	-	+	NA
78.	*Eclipta alba*	Bhringraj	Asteraceae	-	+	LC
79.	*Euphorbia lobatum*	-		-		NA
80.	*Indigofera astragalin*	Dagadia,	Fabaceae	+	+	NA
81.	*Indigofera cordifolia*	Gokhru	Fabaceae	-	+	NA
82.	*Leucas aspera*	Kubi	Lamiaceae	-	+	NA
83.	*Pupalia lappacea*	Nagadaminee	Amaranthaceae	-	+	LC
84.	*Tephrosia strigosa*	-	Fabaceae	+	+	NA
85.	*Sesamum indicum*	Tal	Pedaliaceae	+	+	NA
86.	*Commelina undulata*	Jalapippaling	Commelinaceae	-	+	NA
87.	*Hibiscus lobatus*	Lobed Leaf	Malvaceae	-	+	NA
88.	*Physalis minima*	Rasbhari	Solanaceae	+	+	VU
89.	*Triumfetta*	Chiki Habit	Tiliceae	+	+	NA
Grasses						
90.	*Aristida funiculata*	-	Poaceae	+	+	NA
91.	*Aristida adscensionis*	Bristle grass	Poaceae	-	+	NA
92.	*Brachiaria ramosa*	-	Poaceae	+	+	LC
93.	*Cynodon dactylon*	Doob ghas	Poaceae	+	+	NA
94.	*Dichanthium*	Sheda Grass	Poaceae	+	+	NA
95.	*Sorghum halepense*	jangli-jowar	Poaceae	+	+	NA
96.	*Saccharum*	Knas	Poaceae	+	+	LC
97.	*Saccharum Bengalens*	Munj	Poaceae	-	+	NA

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
(+) Shows: Presence of the species and (-) Shows: Absence of the species
IUCN: International Union for Conservation of Nature & Natural Resources

Interpretation: -

- A primary field survey was carried out within 10 km radius impact zone in and around the Project area to study the floral and faunal diversity of the terrestrial and aquatic environment of the study area.
- No National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas exists within 10 km radius study area.
- There are total 97 species have been found in the study area in which 35 species are tree species, 8 species of grasses,16 species are shrubs species,38 species are herbs and climbers.
- Poaceae is the most occurred family in grasses.
- Fabaceae is the most occurred family in trees.
- Some important Medicinal uses of Nimb (Neem)-***Azadirachta indica***. Neem whole plant is extensively used in Ayurvedic System Medicine for various skin disorders and diabetes. Nature has served this plant with various organic Compounds that are used as insecticides and pesticides.
- Many other species of trees, herbs and shrubs are having several medicinal properties and other uses.

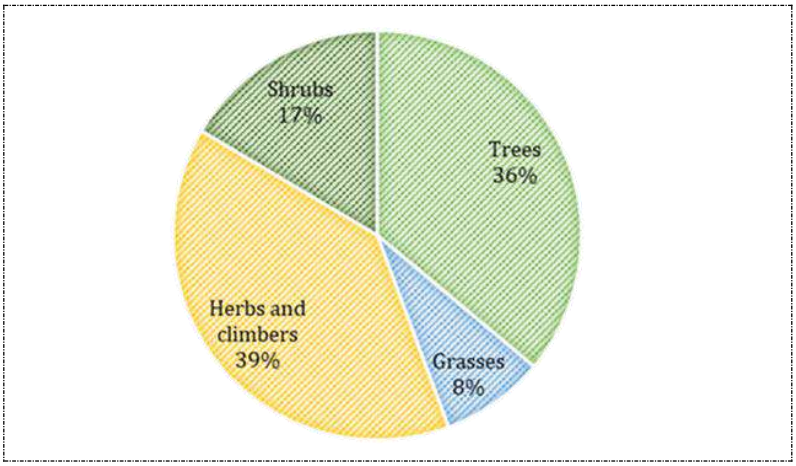

Figure 13 GRAPHICAL REPRESENTATION OF FLORAL DIVERSITY

Table 20 Inventory of Aquatic Floral Diversity in 10 km radius of Existing Plant Site

Based on Actual Sighting, based on inputs from locals and Perused from Secondary Data

S. No	Scientific Name	Local name	Family	Habit	IUCN conservation status
1.	*Lemna perpusila*	Small Duckweed	Lemnaceae	Free-floating, aquatic plant found on the surface of still or slow-moving freshwater.	NA
2.	*Spirodela polyrrhiza*	Giant Duckweed	Araceae	Free-floating, aquatic plant, forming dense mats on the surface of water bodies.	LC
3.	*Wolffia columiana*	Water meal	Arales	Free-floating, smallest flowering plant, found on the surface of still freshwater.	NA
4.	*Nymphaea alba*	White water lily	Nymphaeales	Floating-leaved, rooted aquatic plant, with large leaves and flowers floating on the water surface.	LC
5.	*Potamogeton diversifolius*	American pond weed	Potamogetonacea	Submerged aquatic plant with thread-like leaves, typically found in freshwater habitats.	NA
6.	*Ceratophyllum Demersum*	Water head, pond weed	Ceratophyllales	Submerged, free-floating aquatic plant, often found in still or slow-moving water.	LC
7.	*Typha elephantina*	Era	Typhaceae	Emergent aquatic plant, often found in wetlands and marshes.	LC
8.	*Hydrilla verticillata*	Hydrilla	Hydrocharitales	Submerged aquatic plant, forming dense underwater mats.	NA
9.	*Vallisneria spiralis*	T ape grass	Hydrocharitaceae	Submerged, rosette-forming aquatic plant, commonly found in freshwater habitats.	LC
10.	*Cyperusrotundus*	Nutgrass, Coco	Cyperaceae	Perennial sedge, often found in wet or dry soil, considered a weed.	NA
11.	*Bacopa monnieri*	Brahmi	Plantaginaceae	Prostrate or creeping aquatic herb, often found in wetlands or along water bodies.	LC
12.	*Arundo donex*	Arundo	Poaceae	Tall, perennial grass, typically found in wetlands or along watercourses.	NA
13.	*Chenopodium album*	Bathua	Amaranthaceae	Annual herb, often found in disturbed soils, considered a weed.	NA
14.	*Polygonum species*	knotweed	Polygonaceae	Various habits including terrestrial and aquatic, often found in moist or wet habitats.	CR
15.	*Eichhornia crassipes*	Water hyacinth	Pontederiaceae	Free-floating aquatic plant, often forming dense mats on the surface of water bodies.	NA

S. No	Scientific Name	Local name	Family	Habit	IUCN conservation status
16.	*Utricularia*	-	Lantbulariaceae	Free-floating or rooted aquatic carnivorous plants, often found in nutrient-poor waters.	LC
17.	*Potamogeton crispus*	Curly -leaf Pond weed	Potamogetonaceae	Submerged aquatic plant, commonly found in freshwater habitats.	LC
18.	*Colocasia Spp.*	Elephant Ear	Araceae	Large, broad-leaved aquatic or semi-aquatic plants, often found in wetlands.	NA
19.	*Canna lily*	Indian Shot	Cannaceae	Herbaceous perennial, often found in wetlands or moist soils.	NA

Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
IUCN: International Union for Conservation of Nature & Natural Resources;

Interpretation: -

- There are total 19 species of aquatic floral diversity have been found in the study area.
- There are total 1 critically endangered species, whereas 8 species are least concerned and 10 species are not assessed.
- **Least Concern**- A least-concern species is a species that has been categorized by the International Union for Conservation of Nature (IUCN) as evaluated as not being a focus of wildlife conservation because the specific species is still plentiful in the wild.
- **Not Assessed -** A not evaluated species is one which has been categorized under the IUCN Red List of threatened species as not yet having been assessed by the International Union for Conservation of Nature. A species which is uncategorized and cannot be found in the IUCN repository is also considered 'not evaluated'.

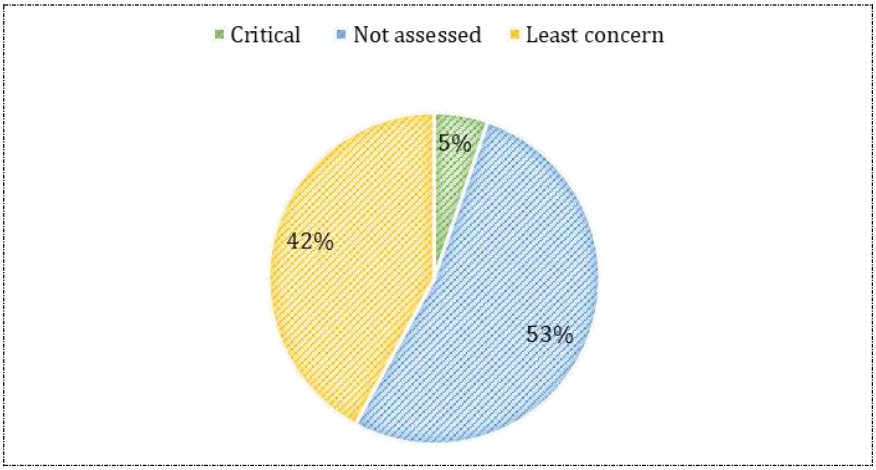

Figure 14 GRAPHICAL REPRESENTATION OF AQUATIC DIVERSITY

Table 21 Inventory of Faunal Diversity in Core & Buffer Zone of Existing Plant Site

Based on Actual Sighting, based on inputs from locals and Perused from Secondary Data

S. No.	Scientific Name	Common Name	Status as per W(P)AA, 2022	Core Zone	Buffer Zone	IUCN conservation status
Mammals						
1.	***Felis chaus***	**Jungle cat**	**Sch.I**	**-**	**+**	**LC**
2.	***Herpestes edwardsii***	**Common Mongoose**	**Sch. I**	**-**	**+**	**LC**
3.	*Funambulus pennanti*	Five Striped Palm Squirrel	Sch. IV	-	+	LC

S. No.	Scientific Name	Common Name	Status as per W(P)AA, 2022	Core Zone	Buffer Zone	IUCN conservation status
4.	*Rattus rattus*	House Rat	Sch. IV	-	+	LC
5.	*Mus booduga*	Little Indian field mouse	Sch. IV	-	+	LC
6.	*Semnopithecus entellus*	Common Langur	Sch. II	-	+	NA
7.	*Sus scrofa*	Wild Boar	Sch. II	-	+	LC
8.	*Lepus nigricollis*	Indian hare	Sch. II	-	+	LC
9.	***Canis aureus***	**Jackal**	**Sch I**	**-**	**+**	**LC**
10.	*Axis axis*	Chital	Sch.II	-	+	LC
Reptiles						
11.	***Ptyas mucosus***	**Rat Snake**	**Sch I**	**-**	**+**	**NA**
12.	*Mabuya carinata*	Brahminy Skink	Sch. IV	-	+	NA
13.	*Hemidactylus flaviviridis*	House Gecko/ Chhipkali	Sch. IV	-	+	NA
14.	***Naja naja***	**Cobra**	**Sch I**	**-**	**+**	**LC**
Amphibians						
15.	*Rana hexadactyla*	Indian Pond Frog	Sch.IV	-	+	LC
16.	*Rana limnocharis*	Indian cricket Frog	Sch.IV	-	+	LC
Butterflies						
17.	*Danaus chrysippus*	Plain Tiger	Sch IV	-	+	LC
18.	*Ixias Marianne*	White -orange Tip	Sch IV	-	+	NA
19.	*Precis orithya*	Blue Pancy	Sch. IV	-	+	NA
20.	*Papilio demoleus*	Common Lime	Sch. IV	-	+	NA
21.	*Junonia lemonias*	Lemon pansy	Sch. IV	-	+	NA
22.	*Belenois aurota*	Pioneer	Sch. IV	-	+	LC
23.	*Papilio polytes*	Common Mormon	Sch. IV	-	+	NA
24.	*Apis cerana indica*	Choti Madhumakkhi	Sch. IV	-	+	NA
25.	*Apis dorsata*	Badi Madhumakkhi	Sch. IV	-	+	NA
26.	*Buthus sp.*	Scorpion	Sch. IV	-	+	NA
27.	*Stegodyphus sp.*	Social Spider	Sch. IV	-	+	NA
28.	*Sympertrum fonscolombii*	Red - veined darter (Dragonfly)	Sch. IV	-	+	LC

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
(+) Shows: Presence of the species and (-) Shows: Absence of the species
IUCN: International Union for Conservation of Nature & Natural Resources;
W(P)AA, 2022: Wildlife (Protection) Amendment Act, 2022

INTERPRETATION: -

- There are total 28 species of faunal diversity in which 10 species are of mammals, 4 species of reptiles, two species of amphibians and 12 species of butterflies have been found in the study area. There are total 5 schedule-I species found in the study area.
- All butterflies have been found to be schedule-II species with 3 least concern species and 9 not assessed species.
- **Schedule-I** Species are: -

  (Naja naja) Cobra, ***(Ptyas mucosus)*** Rat Snake, ***(Canis aureus)*** Jackal ***(Felis chaus)*** Jungle cat, ***(Herpestes edwardsii)*** Common Mongoose.

- **Schedule-I** Species are: - This Schedule covers endangered species. These species need rigorous protection and therefore, the harshest penalties for violation of the law are under this Schedule. Species under this Schedule are prohibited to be hunted throughout India, except.

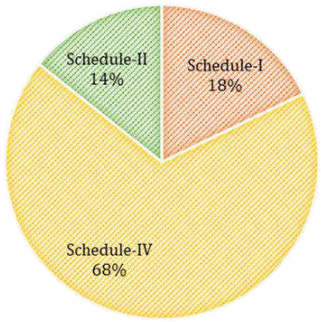

Figure-15 Graphical representation of faunal diversity with respect to their Conservation status

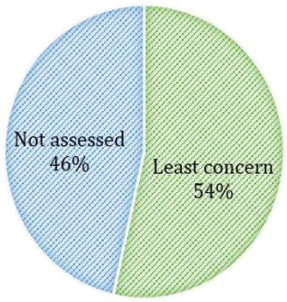

Figure-16 Graphical representation of faunal diversity with respect to their IUCN Status

Figure 10 Graphical representation of faunal diversity

Table 22 Inventory of Avifaunal (Bird) Diversity in Core & Buffer Zone of Existing Plant Site

Based on Actual Sighting, based on inputs from locals and Perused from Secondary Data

S. No.	Scientific Name	Common Name	Status as	Core	Buffer	IUCN
1.	*Acridotheres tristis*	Common Myna	Sch. II	-	+	LC
2.	*Actitis hypoleucos*	Common Sandpiper	Sch. II	-	+	LC
3.	*Bubulcus ibis*	Cattle egret	Sch. II	-	+	LC
4.	*Charadrius dubius*	Little ringed plover	Sch. IV	-	+	LC
5.	*Columba livia*	Rock Pigeon	Sch. IV	+	+	LC
6.	*Copsychus saularis*	Oriental magpie robin	Sch. II	-	+	LC
7.	*Corvus*	Jungle Crow	Sch. II	+	+	LC
8.	*Cuculus*	Indian Cuckoo	Sch. II	-	+	LC
9.	*Eudynamys*	Asian Koel	Sch. II	-	+	LC
10.	*Francolinus*	Grey francolin	Sch. II	-	+	LC
11.	*Galerida cristata*	Common crested lark	Sch. II	-	+	LC
12.	*Gallinula chloropus*	Common moorhen	Sch. II	-	+	LC
13.	*Gracupica contra*	Pied myna	Sch. II	-	+	LC
14.	*Halcyon smyrnensis*	White throated	Sch. II	-	+	LC
15.	*Himantopus*	Black Winged Stilt	Sch. II	-	+	LC
16.	*Hirundo rustica*	Barn Swallow	Sch. II	-	+	LC
17.	*Lanius cristatus*	Brown Shrike	Sch. II	-	+	LC
18.	*Lonchura*	Scaly breasted munia	Sch. II	-	+	LC
19.	*Microcarbo niger*	Little cormorant	Sch. II	+	+	LC
20.	*Apus nipalensis*	Common swift	Sch. II	+	+	LC
21.	*Pseudibis papillosa*	Black ibis	Sch. II	+	+	LC
22.	*Ardea cinerea*	Grey Heron	Sch. II	+	+	LC
23.	*Ocyceros birostris*	Indian grey hornbill	Sch. II	+	+	LC
24.	***Pavo cristatus***	**Indian Peafowl**	**Sch. I**	**-**	**+**	**LC**

S. No.	Scientific Name	Common Name	Status as	Core	Buffer	IUCN
25.	*Ploceus philippinus*	Baya weaver	Sch. II	+	+	LC
26.	*Francolinus*	Grey francolin	Sch. II	+	+	LC
27.	*Coracias*	Indian Roller	Sch. II	+	+	LC
28.	*Halcyon smyrnensis*	White -throated	Sch. IV	+	+	LC
29.	*Ceryle rudis*	Pied kingfisher	Sch. II	+	+	LC
30.	*Merops orientalis*	Green bee-eater	Sch. II	+	+	LC
31.	*Psittacula krameri*	Rose-ringed parakeet	Sch. II	+	+	LC

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
(+) Shows: Presence of the species and (-) Shows: Absence of the species
IUCN: International Union for Conservation of Nature & Natural Resources;
W(P)AA, 2022: Wildlife (Protection) Amendment Act, 2022

Interpretation: -

- There are total 31 species of avifaunal diversity have been found in study area. In which IUCN status of all the species are found to be least concerned.
- Only ***one species*** Indian Peafowl **(*Pavo cristatus)*** is found to be schedule -I species.
- 27 species are found to be schedule -II species

Table 23 Inventory of Ichthyofaunal Diversity in Buffer Zone of Existing Plant Site

Based on Actual Sighting, based on inputs from locals and Perused from Secondary Data

S. No.	Scientific Name	Common Name	Core Zone	Buffer	IUCN conservation
1.	*Catla catla*	Catla	-	+	LC
2.	*Chela bacaila*	Chela	-	+	NA
3.	*Cirrhinus mrigala*	Mrigal	-	+	LC
4.	*Clarias magur*	Catfish	-	+	EN
5.	*Gambusia affinis*	Mosqitofish	-	+	LC
6.	*Labeo bata*	-	-	+	LC
7.	*Labeo rohita*	Rohu	-	+	LC
8.	*Puntius ticto*	Ticto barb/ Pothia	-	+	LC
9.	*Silondia gangetica*	Silond	-	+	NA

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
(+) Shows: Presence of the species and (-) Shows: Absence of the species
IUCN: International Union for Conservation of Nature & Natural Resources;

Interpretation: -

- There are total 9 species of ichthyofaunal diversity have been found in study area. In which two species are not assessed and 6 species are least concerned.

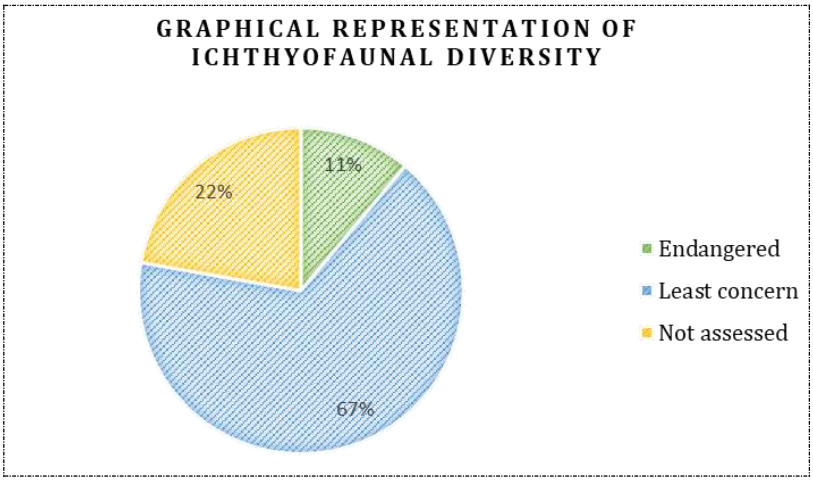

Figure 17 GRAPHICAL REPRESENTATION OF ICHTHYOFAUNAL DIVERSITY

xii. WCP SHOULD HAVE A BRIEF NOTE ABOUT LITERATURE SURVEY OF RESEARCH ON

i. IMPACT OF PROJECT ACTIVITIES ON FLORA AND FAUNA

The developmental programs, policies and projects operated or managed by government or private bodies can cause potential significant changes in the physical, biological and socioeconomic environment. In some cases, the changes may be beneficial while in others it may be detrimental to the environment. Accordingly, environmental impacts studies are required for systematic identification, qualification and interpretation of the anticipated changes.

The establishment and operation of this Plant can have significant impacts on the surrounding flora and fauna. These impacts include:

- Particulate matter and gaseous emissions from stack and fugitive emissions due to transportation activity & material handling may degrade the soil quality of surrounding environment that may affect the biodiversity of surrounding environment.
- Air and Noise Pollution may threaten and cause migration of wild animals and birds.
- Noise and vibrations generated by plant operations can disrupt wildlife behaviour and have negative effects on plant health.
- Fugitive emissions may impact the terrestrial flora. The settlement of dust on the laminar surface of plants can impede the efficiency of photo-transduction and thereby, affect the productivity of plants. In some of the plant, it may also smother the leaf surface blocking stomata, resulting in reduced transpiration.

ii. Relevant research on WCP Area

a. *Champion, H. G. and S. K. Seth, 1968. A Revised Survey of the Forest Types of India. Manager of Publications, Govt. of India, New Delhi*

b. *Rodgers, W. A., Panwar, H. S. and Mathur, V. B. (2000) Wildlife Protected Area Network in India: A Review (Executive Summary). Wildlife Institute of India, Dehradun*

c. *Wildlife (Protection) Act, 1972. Ministry of Environment and Forests, Government of India. http://envfor.nic.in/legis/wildlife/wildlife1.html*

d. *Bio- geographic Classification of India as per Wildlife Institute of India (2000)*

e. *Bioclimatic zones of India, Koppen (1931)*

f. *J.C. Bhattacharjee, C., Roy Chowdhury, R.J. Landey ans S. Pandey (1982- Bulletin No. 7). Bioclimatic Analysis of India*

g. *R.S. Murthy (1982). Land Use and Soil Types in India, National Bureau of Soil Survey and Land Use Planning,*

h. *Indian Council of Agriculture Research (ICAR), Nagpur.*

i. *Central Pollution Control Board (MoEFCC), (2000) - Guidelines for Developing Green belts*

j. *India State of Forest Report 2019, Forest Survey of India (MoEFCC, GOI), Dehradun Report- 2019*

CHAPTER: II

A QUANTIFIABLE EXPLANATION OF THE EXPECTED DEGRADATION AS A RESULT OF THE PROJECT'S IMPLEMENTATION WILL BE GIVEN. THE PLAN SHOULD INCLUDE INFORMATION ON ANY QUALITATIVE CHANGES IN THE WILDLIFE HABITAT PATTERN IN THE WCP AREA AS RESULT OF PROJECT IMPLEMENTATION

Objective of the Wildlife Conservation Plan

Habitat Protection and Preservation: Identify and protect critical habitats for flora and fauna in the project area. Implement measures to avoid or minimize disturbance to these habitats during the project.

Biodiversity Conservation: Prioritize the conservation of plant and animal species, especially those endemic or endangered, by safeguarding their habitats and supporting their population.

Ecological Restoration: Develop plans for ecological restoration in areas affected by plant operation activities. Implement rehabilitation measures to restore habitats after mining activities are completed.

Habitat Connectivity: Establish wildlife corridors and connectivity to enable the movement and migration of species impacted. This helps maintain genetic diversity and healthy wildlife populations.

Species Management: Develop specific management plans for the protection and conservation of key wildlife species impacted by plant operation. Implement measures to support their survival and reproduction.

Environmental Impact Mitigation: Implement best practices to minimize environmental disturbances during construction and operation phases. Control noise, dust, and other pollutants to minimize impacts on wildlife.

Monitoring and Research: Conduct regular monitoring and research on wildlife populations to assess the effectiveness of conservation efforts and identify potential issues.

Community Engagement: Involve local communities and stakeholders in wildlife conservation efforts, raising awareness, providing training, and fostering community participation.

Compliance with Regulations: Ensure compliance with all relevant wildlife protection laws and regulations. Obtain necessary permits and approvals to safeguard wildlife and their habitats.

Sustainable Mining Practices: Promote and implement sustainable mining practices to minimize the ecological footprint and preserve biodiversity.

Reclamation and Rehabilitation: Develop comprehensive reclamation and rehabilitation plans to restore the project areas, creating habitats suitable for wildlife.

Conservation Partnerships: Collaborate with conservation organizations and experts to develop and implement effective wildlife conservation strategies.

Environmental Education: Provide environmental education and training to the project's workforce and contractors to raise awareness about wildlife conservation.

Continual Improvement: Continuously review and assess the effectiveness of wildlife conservation measures, adjusting strategies as needed based on new knowledge and best practices.

By addressing these management objectives, the project aims to mitigate the impacts on wildlife, preserve biodiversity, and promote sustainable coexistence between the project and the natural environment.

1.1 IMPACTS IDENTIFICATION AND EVALUATION

The developmental programs, policies and projects operated or managed by government or private bodies can cause potential significant changes in the physical, biological and socio-economic environment. In some cases, the changes may be beneficial while in other it may be detrimental to the environment. Accordingly, environmental impacts studies are required for systematic identification, qualification and interpretation of the anticipated changes.

The main environmental problems associated with project activities are land degradation (change in topography, soil erosion), visual intrusion, disturbance to hydrological system, water, air and noise pollution which ultimately impact upon the floral and faunal status of the project area. However, occurrence and magnitude of these impacts are entirely depending on project location, mode of operation and adoption of latest technologies.

Therefore, this study has been conducted to assess the impact of project activities and associated activities on the diversity and distribution of wildlife.

1.2 ANTICIPATED IMPACT ON THE ENVIRONMENT AND WILDLIFE:

- Soil contamination can occur due to improper disposal activities of construction debris. There will be change in upper surface of the land exposed to construction work.
- Fugitive dust emissions from vehicles and equipment to be deployed during the construction phase is also likely to result in marginal increase in the levels of SO2, NOx, PM, CO.
- The flora present in the area will get affected by long term deposition on leaves surfaces and can cause blockage of stomatal pores. Wilting of leaves of plants primarily exposed to PM can be seen. Deposition of PM on soil surface can reach to ground water and can cause contamination beyond acceptable extents. The dispersion of PM can also cause accumulation in treated waste water and rainwater collected in pond and can cause contamination.
- The noise generated may cause a significant impact on workers and surrounding residents and if exceeds the permissible levels for a continuous period of time, this may lead to loss of attention/concentration resulting in accidents also reducing the efficiency of working staff.
- Increase in suspended solids due to soil run-off during heavy precipitation due to loosen soil at construction site which can lead to polluting the nearby water bodies of the area.
- Dry deposition (settling of pollutants on the nearby water bodies) and “wet deposition” (the gases in the air fall to the ground mixed with rain). Contamination of ground water due to

leaching of chemicals and other hazardous waste.

- Particulate matter and gaseous emissions from stack and fugitive emissions due to transportation activity & material handling may degrade the soil quality of surrounding environment that may affect the biodiversity of surrounding environment.

1.3 MITIGATION AND CONSERVATION MEASURES:

- Water spraying on roads and construction site will be done in order to suppress fugitive dust. Construction equipment having PUC Certificate will be deployed during the activity to ensure the vehicular pollution within the standards.
- Installation of equipment/ machinery will be done with low generation of noise as per design.
- Scaling up the greenbelt development & plantation in and around the Plant site to control the spread of particulate emission and noise.
- Efficient Air Pollution Control Equipment (APCE) have been/ will be installed to keep the emissions within the permissible limits.
- Using paved roads for transportation to minimize fugitive emissions.
- Material transport in covered truck and storing it under tarpaulin cover.
- Transport vehicles and machinery is being/ will be properly maintained and periodically checked for pollution level to reduce noise and gaseous emission in the surrounding environment.
- Adequate stack height has been considered to minimize dust emissions and proper dispersion.
- Waste water is being / will not be discharged outside the grinding unit premises.
- A horticulturist has been engaged who ensures soil quality improvement in the plant area, by adequate manuring and fertilizing. Therefore, no adverse impact on the soil quality of the area is anticipated.
- The quantity of ground water required for existing plant is 200 KLD and no additional water will be required for proposed expansion as existing water permission of 200 KLD is sufficient to meet the requirement for proposed expansion.
- Storm water drains are already provided to check the run-off during precipitation. The drains will be/ are properly aligned in conformity with the site drainage pattern so that the alteration is kept to the minimum and flooding or soil erosion does not occur.
- The waste water generated during construction phase will be treated in existing STP and treated water will be utilized in greenbelt development & plantation.
- Continuous Emission Monitoring System (CEMS) has been installed to assess the quality of the stack emission.
- Efficient Air Pollution Control Equipment (APCE) like Bag House at Cement Mill and Bag filters at various transfer points are being / will be installed to keep the emissions within the permissible limits.
- Routine maintenance of APCEs.

- Automatic shutdown will take place due to non-working of APCE.
- Hence, the overall quality of the ambient air is being / will be maintained within the limit prescribed by CPCB after the commencement of the operation of Proposed Expansion project.

1.4 QUALITATIVE CHANGES:

There have been no significant qualitative changes in the wildlife habitat patterns within the WCP area. This is primarily because there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, migratory corridors for wildlife, Ramsar Sites, or Tiger/Elephant Reserves (either existing or proposed) within a 10 km radius of the proposed project site. Additionally, the project area contains minimal vegetation and is not suitable for wildlife movement.

Issues		Reason/Status in relation to project site	Suggestions	Reference/Method
Species	Rare/ Endangered/ Threatened species	List of Rare/ Endangered/ Threatened species are given in the list of flora and in previous chapters. Proper mitigation plans have been prepared and incorporated into this Wildlife Conservation Plan (WCP).	Species-specific conservation plan is prepared along with cost implications for conservation activities	Field observation, interview of local biologists and people. Information available in public domain, IUCN and BNHS Check list and Forest Working Plan of concerned Forest Division.
	Endemic Species	No endemic species of any flora, fauna or wildlife present in the study area	Nil	Field survey, Literature review
Important Natural Habitats	Protected Areas	No National Park, Wildlife Sanctuary, Tiger Reserve and Biosphere Reserve falls in the 10-km radius study area	Nil	ENVIS Centre on Wildlife and Protected Areas, Government of Uttar Pradesh protected area website, Google Earth, Project Maps etc.
	Important Bird Areas	No Important bird areas are falling in the 10-km radius area for migratory bird habitat.	Proper mitigation measures will be followed as per Environment Management Plan	ENVIS Centre on Wildlife and Protected Areas, Important Bird Area in India, IBA Book (Birdlife International).
	Ramsar site	No Ramsar sites is present in 10 km periphery from the project site.	Nil	Ramsar Website / ENVIS Centre on Wildlife and Protected Areas
	Wetlands of National Importance	No Wetlands of national importance present in 10 km periphery from the project site.	Nil	ENVIS Centre on Wildlife and Protected Areas, Wetlands directory of Government of India.

Issues		Reason/Status in relation to project site	Suggestions	Reference/Method
	Wetlands of international Importance	No Wetlands of international importance Present in 10 km periphery of the project site.	Nil	Liet al. 2009 "Status of water birds in Asia". Wetlands International Publication.
	Wildlife Corridors	No Wildlife corridors are present in 10km radius of study area.	The project will strictly take the conservation and management activities towards wildlife.	ENVIS Centre on Wildlife and Protected Areas, Consultation with local naturalists and Forest officials, Forest Working Plan of concerned Forest Division.
	Eco-sensitive zone/Eco-Sensitive Area identified by government	No Eco-sensitive zone/Eco-Sensitive Area are present in 10km radius of study area.	NIL	ENVIS Centre on Wildlife and Protected Areas, Consultation with local naturalists and NGOs
	Forest Areas	No Reserved and Protected Forest area is present in the core area and buffer zone.	The project will create thick canopied green belt and plantations on the periphery of project site for control of pollutants	Forest Working Plan of Hamirpur Forest Division, Uttar Pradesh Forest Department website, Forest area KML file, Consultation with Local Forest officials and Forest Area Map/
	Water bodies	Nallah (0.5 Km in NW direction) • Karoran Nala (5.5 Km in North direction) • Jhangra Nala (8.5 Km in SE direction) Chandrawal River (9.0 Km in SE direction)	No waste water will be discharged from the proposed project.	Project map and local maps, Google Earth
	Breeding/ Nesting areas	There are no breeding/nesting sites are falling in study area	NIL	Literature Survey (Sunderraj et al 2002), Project Map and local maps, Google Earth

1.5 DETAILS OF SCHEDULE-I SPECIES FOUND IN 10 KM RADIUS OF PROJECT AREA

1. Cobra (*Naja naja*)

Scientific Name: *Naja naja*

IUCN Status: Least Concern

Description: The Indian cobra, also known as the spectacled cobra, is a highly venomous snake native to the Indian subcontinent. It can reach lengths of up to 1.8 meters and is distinguished by its hood, which it spreads when threatened. The hood typically features a spectacle-shaped pattern. Cobras are often found in a variety of habitats, including forests, agricultural lands, and urban areas. They feed on rodents, frogs, birds, and other snakes.

Threats:

- **Habitat Destruction:** Urbanization, agriculture, and deforestation reduce their natural habitat.
- **Persecution:** Often killed by humans out of fear or for safety.
- **Illicit Trade:** Captured for traditional medicine, snake charming, and illegal pet trade.

Conservation Measures:

- **Habitat Protection:** Conserving and restoring natural habitats.
- **Education and Awareness:** Educating the public on the ecological role of cobras and reducing unwarranted fear.
- **Legislation:** Enforcing wildlife protection laws to prevent hunting and trade.

India-Specific Conservation Measures:

- **Protected Areas:** Establishing and maintaining protected areas like wildlife sanctuaries and national parks.
- **Anti-Venom Production:** Enhancing facilities and research for anti-venom production.
- **Public Awareness Campaigns:** Conducting educational campaigns to reduce snake-human conflicts.

2. Rat Snake (*Ptyas mucosus*)

Scientific Name: *Ptyas mucosus*

IUCN Status: Least Concern

Description: The Indian rat snake, or dhaman, is a non-venomous snake commonly found throughout the Indian subcontinent. It can grow up to 3.5 meters in length, has a slender body, and is usually brown or olive with a lighter underside. Rat snakes are agile and fast-moving, often found in fields, forests, and near human settlements. They primarily feed on rodents, which helps control pest populations.

Threats:

- **Habitat Loss:** Agricultural expansion, urbanization, and deforestation.
- **Persecution:** Killed by humans who mistake them for venomous snakes.
- **Road Mortality:** Frequently killed on roads.

Conservation Measures:

- **Public Education:** Raising awareness about their non-venomous nature and ecological benefits.
- **Habitat Conservation:** Protecting and restoring their habitats.

India-Specific Conservation Measures:

- **School Programs:** Implementing educational programs in schools to teach children about the importance of snakes.
- **Wildlife Corridors:** Establishing wildlife corridors to reduce road mortality.
- **Community Involvement:** Involving local communities in conservation efforts through citizen science projects.

3. Jackal (*Canis aureus*)

Scientific Name: *Canis aureus*

IUCN Status: Least Concern

Description: The golden jackal is a medium-sized carnivore native to North and East Africa, Southeastern and Central Europe, Asia Minor, the Middle East, and South Asia. It has a broad diet that includes small mammals, birds, fruits, and vegetables. Jackals are adaptable and can live in a variety of habitats, including deserts, grasslands, and forests.

Threats:

- **Habitat Degradation:** Loss and fragmentation due to agriculture and urbanization.
- **Persecution:** Killed for preying on livestock.
- **Disease:** Vulnerable to diseases like rabies and canine distemper.

Conservation Measures:

- **Habitat Protection:** Conserving and managing natural habitats.
- **Conflict Mitigation:** Implementing measures to reduce human-jackal conflicts.
- **Health Monitoring:** Monitoring and managing diseases within jackal populations.

India-Specific Conservation Measures:

- **Protected Areas:** Strengthening the network of protected areas where jackals are found.
- **Vaccination Programs:** Implementing vaccination programs to control rabies and other diseases.
- **Conflict Resolution:** Developing and promoting non-lethal methods to protect livestock.

4. Common Mongoose (*Herpestes edwardsii*)

Scientific Name: *Herpestes edwardsii*

IUCN Status: Least Concern

Description: The Indian grey mongoose is a small carnivorous mammal found in the Indian subcontinent and West Asia. It is known for its agility and ability to combat venomous snakes. Mongooses have a grey or brownish coat and typically inhabit forests, scrublands, and agricultural areas. They feed on insects, small mammals, reptiles, and birds.

Threats:

- **Habitat Loss:** Urbanization, deforestation, and agricultural development.
- **Persecution:** Often killed by humans who see them as pests.
- **Hunting:** Trapped for fur and meat.

Conservation Measures:

- **Public Awareness:** Educating people about the ecological benefits of mongooses.
- **Habitat Protection:** Preserving and restoring natural habitats.
- **Legal Protection:** Enforcing wildlife protection laws.

India-Specific Conservation Measures:

- **Community Education:** Conducting awareness programs in rural areas about the ecological role of mongooses.
- **Legislation Enforcement:** Strengthening enforcement of laws protecting mongooses.
- **Research Initiatives:** Supporting research on mongoose behavior and ecology to inform conservation strategies.

5. Peafowl (*Pavo cristatus*)

Scientific Name: *Pavo cristatus*

IUCN Status: Least Concern

Description: The Indian peafowl, or peacock, is a large and colorful bird native to South Asia. Males are known for their vibrant blue and green plumage and long, ornate tail feathers used in courtship displays. Peafowls inhabit forests, grasslands, and farmlands. They are omnivorous, feeding on insects, plants, and small animals.

Threats:

- **Habitat Destruction:** Deforestation, agricultural expansion, and urbanization.
- **Poaching:** Hunted for feathers, meat, and traditional medicine.
- **Human-Wildlife Conflict:** Crop damage leads to conflicts with farmers.

Conservation Measures:

- **Habitat Preservation:** Protecting and restoring natural habitats.
- **Anti-Poaching Efforts:** Strengthening anti-poaching measures and law enforcement.
- **Community Engagement:** Involving local communities in conservation efforts and conflict mitigation strategies.

India-Specific Conservation Measures:

- **Sacred Groves:** Leveraging cultural and religious beliefs that protect peafowls in certain areas.
- **Wildlife Protection Laws:** Strict enforcement of laws prohibiting hunting and trade of peafowls.
- **Community-Based Programs:** Encouraging community-based conservation programs that involve local people in protecting peafowls and their habitats.

1.6 IMPACT ON DISPLACEMENT/MOVEMENT OF FAUNA- TERRESTRIAL, AQUATIC OR AERIAL (SUCH AS THE CREATION OF BARRIERS, ETC.)

As the proposed expansion Project area does not currently contain any major vegetation, there will be no impact on vegetation within the plant site. It should be noted that even the areas where plantation is being done will not be immediately available for wild animals. With no observed movement in the core zone due to the industrial nature of the project area, the focus shifts to the buffer zone where wildlife movement has been documented. Additionally, the company is implementing comprehensive measures for the conservation and protection of wildlife species within the buffer area.

To enhance the protection of migratory fauna, measures will be taken to provide maximum possible food, shelter, and cover. Barbed wire fencing has been implemented in most areas of the Plant within the impact zone. Wild animals within this area typically avoid the Project areas due to routine activities, lighting, and the movement of vehicles in and around the project. These measures collectively contribute to minimizing potential disturbances to wildlife within the project's influence.

- **Impacts during construction phase:**

  During the construction phase, the impacts will be due to the following activities:

  - Movement of trucks containing construction material and machinery used for construction.
  - Clearing and levelling of top soil for construction activities.

- **Impacts during operation phase:**

  During the operation phase, the impacts will be due to the following activities:

  Inward movements of trucks containing Raw material and Outward movement of trucks containing Finished products, Hazardous waste and E-waste after screening.

Based on observations, literature review and consultations with the local people and experts, we formulated following impact vs. mitigation matrix.

- **Direct Threat**

  Direct threat is due to the fear of wild animals causing use of some deterring methods to avoid entrance of wild animals in the core and buffer area. This may lead to killing of the wild animals. There may also be accidental killings due to movement of large number of vehicles, machineries and equipment. Fire near roadside also poses a direct threat as a number of small and medium animals are trapped and killed in the forest fire, and sometimes the large animals are also trapped.

- **Indirect Threat**

  Indirect threat is due to shrinkage and degradation of habitat, shortage of Food and water. The animals in search of food and water try to enter in to habitations. Most of the man animal conflict takes place due to indirect threat.

1.7 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Anticipated environmental impacts due to operation of the proposed project along with mitigation measures.

Table 24 Quantification of impact on biological environment vs. mitigation matrix

S. No.	Parameters	Impact	Mitigation
1.	**Direct Impact**	• Loss (damage) of woodlands, low-lying grasslands/fallow fields and agricultural lands • Fragmentation of habitats • Landscape connectivity disruption due to site fencing prevents movement of larger and middle-sized mammals • Dust deposition on vegetation; noise and other disturbance to birds and other wild animals	• No loss of habitat, as Plant site does not locate in any designated forest land. • There are no Reserved or Protected forests in the study area but as the availability of fauna is there, awareness among local people and company employee for wildlife education is essential. • Some fugitive dust will be generated from transportation activities, which will be/ is being controlled by water spraying or development of green belt around the plant boundary which acts as an effective green barrier.
2.	**Indirect Impact**	• For all the potential impacts that do not manifest immediately with the activity or which occur at a different place as a result of the activity, • Example: Invasion of alien weed species. • Vegetation damage due to industrial pollutants may have secondary effects on associated fauna like insects and birds.	• Native plant species as per CPCB guidelines, and as per Bio-geographic zones of India will be selected for greenbelt and plantation programme. • No exotic species will be planted. • Point source emission from stack, fugitive emission, noise generation and effluent waste water generation will be minimized at maximum level for the control of adverse impact on insects and birds, which are pollinators in our Ecosystem.
3.	**Construction Stage Impact**	• Permanent loss of habitat: Fragmentation: Habitat isolated in patches due to project location. • Increased fragmentation: Habitats isolated in patches due to project location. • Habitat damage: Habitats damaged due to loss and disturbance of plant communities and listed plant species and invasion of alien species. • Due to Industrial Pollutants: Dust, and gases generated during construction phase may affect human beings, plants, animals and habitats nearby.	• No habitat will be fragmented from the project activity. • No loss of plant communities and no planting of exotic species, only ecologically important indigenous plants species will be planted. • Properly maintained machinery equipment and vehicles having Pollution under Control (PUC) certificate will be deployed during the project to restrict the exhaust emission. Fugitive dust emissions will be prevented by water sprinkling on roads and construction site.

S. No.	Parameters	Impact	Mitigation
Hence, in construction phase impact will be of short term and low intensity			
4.	**Operation and Maintenance Stage Impact**	The level of impact varies with the habitats and species present and the type of project / activity. Such as invasion of exotic species, disturbance to wildlife and reduction of its movement, reduction of genetic diversity and population viability, alteration of ecological flow paths. • Induced by chemical alterations (contamination of air, soil and water) and physical alterations (changes in the water flow, light, temperature, etc.). • Larger ecological barrier – Road transport corridors. De-silting river vis-a-vis increase in drainage may change the water regime of river side marshes, permanent marshes may change into seasonal marshes with reduced area and decreased wetland biota.	• Greenbelt is being/will be developed all along boundary to reduce dust and noise pollution. • No exotic species will be planted. • No movement of wildlife will be done in Project area. • Proper source level abatement will be done for air pollution (dust and gaseous).
After establishment of proposed project, magnitude of impact will be at local level with low intensity as proper mitigation measures will be followed.			

CHAPTER-III:

a) **OBJECTIVES OF MANAGEMENT TO ADDRESS THE ISSUE OF WILDLIFE CONSERVATION (BOTH FLORA AND FAUNA) ARISING OUT OF PROJECT IMPLEMENTATION.**

Objective of the Wildlife Conservation Plan

1. **Preservation of Biodiversity:** Ensure the protection and conservation of both plant and animal species in the Project area. This includes safeguarding their habitats, promoting sustainable ecosystem management, and preventing the loss of biodiversity.
2. **Mitigation of Negative Impacts:** Implement measures to minimize adverse effects on wildlife caused by the project. This involves identifying potential risks and developing strategies to mitigate habitat fragmentation, disturbance, pollution, and other detrimental factors.
3. **Habitat Restoration and Enhancement:** Undertake efforts to restore and enhance habitats affected by the project. This may involve reforestation, habitat rehabilitation, creation of wildlife corridors, and promoting ecological connectivity to support the natural movement of species.
4. **Species Management:** Implement specific measures to protect and manage endangered, threatened, or vulnerable species within the Project area. This can include species monitoring, population management, and implementing conservation programs tailored to the needs of particular species.
5. **Stakeholder Engagement and Awareness:** Foster collaboration with local communities, government agencies, NGOs, and other stakeholders to raise awareness about wildlife conservation. Encourage participation in conservation efforts, promote sustainable practices, and establish mechanisms for ongoing dialogue and feedback.
6. **Compliance with Environmental Regulations**: Ensure strict adherence to relevant environmental laws, regulations, and permits pertaining to wildlife conservation. This includes monitoring and reporting on compliance, as well as taking corrective measures when necessary.

By addressing these management objectives, the project aims to mitigate the impacts on wildlife, preserve biodiversity, and promote sustainable coexistence between the project and the natural environment.

b) **STRATEGIES TO MITIGATE AND MINIMIZE ADVERSE IMPACTS AS INDICATED IN CHAPTER-2:**

Habitat to be developed as a gradual process side by side with the Project activities.

A. Soil & Moisture Conservation:

- During construction activity, the impact on soil will be limited to the construction site only and will be mainly due to the left-out of construction material used resulting in soil deterioration.

- If construction material will be disposed of on land, then it can alter the soil quality to some extent and top soil will get affected. Due to the accumulation of cement used for construction purpose on the top soil results in the lack of oxygen and hence, reducing the soil porosity which will result in loss of fertility.
- Degradation of soil quality may take place due to the settling of air borne dust, contamination due to the effluent discharge, material spillage, unscientific disposal of solid and hazardous waste, if any. This may lead to change in physio-chemical characteristics of soil of the area.
- Efficient Air Pollution Control Equipment (APCE) will be installed at all major stacks to keep the emissions within 30 mg/Nm3. Adequate stack height helps to control dust emissions and safe discharge of hot gases.
- Solid and hazardous waste will be stored and disposed of as per prevailing rules.
- A horticulturist will be engaged to ensure soil quality improvement in the Project area, by adequate manuring and fertilizing. Therefore, no adverse impact on the soil quality of the area will be anticipated.

The objective of the Soil and Moisture Conservation Plan:

- **Enhancing Soil Moisture in the Buffer Zone**: The company aims to improve soil moisture levels within the Buffer Zone to support forest growth and vegetation. This objective highlights the commitment to maintaining and promoting a healthy ecosystem.
- **Improved Growth and Water Retention**: The implementation of soil moisture conservation operations results in better vegetation growth, increased water retention, and the availability of more grasses and forage for wildlife and cattle. These measures contribute to maintaining a balanced and thriving ecosystem.
- **Provisions for Water availability to Wildlife**: The use of various structures like continuous contour bunds, staggered contour bunds, garland canals, percolation tanks, Gabion structures, and water impoundments ensures the availability of water resources for various terrestrial & aquatic wildlife. These structures help to create suitable habitats and provide necessary water resources within the area.
- **Preventing Spill-over**: While implementing soil and moisture conservation measures, company with consultation to officials of forest department will ensure that there is no spill-over or adverse impact on the surrounding areas. Careful planning and implementation will be taken care to prevent any negative consequences beyond the designated area.
- **Protection of flora and fauna in Core and Buffer Zone**: Adequate treatment and conservation efforts will be applied to the boundary areas and Buffer Zone to prevent ecological damage. These areas play a critical role in maintaining the integrity of the ecosystem, and protecting them helps safeguard the overall environmental balance.
- **Development of Silvo-pasture**: Silvo-pasture refers to the practice of integrating trees, forage crops, and livestock on the same land. The plan includes the development of silvo-pasture

system in consultation with the local forest department. This approach promotes the growth of grasses and forage resources within the area, benefiting both wildlife and livestock.

B. MEASURES FOR CONTROL OF FUGITIVE EMISSIONS:

Adequate Pollution control measures are being/ will be taken to keep the fugitive emissions from all sources within the statutory norms, brief of which are given below:

- 1 bag house has been installed at existing cement mill (VRM) and Bag filters (25 nos. (existing) + 4 nos. (proposed) have been/ will be installed at all material transfer points.
- Clinker, fly ash and Cement is being/ will be stored in the silos.
- Gypsum, slag & limestone is being/ will be stored in the covered sheds.
- Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt & plantation in accordance with CPCB guidelines. The plantation will be done following the Miyawaki plantation in the plant premises.
- Regular cleaning and sweeping of roads and nearby area of storage facilities will be done by vacuum sweeping machine.

C. MEASURES FOR CONTROL OF STACK EMISSIONS:

- Continuous Emission Monitoring System (CEMS) has been installed to assess the quality of the stack emission.
- Efficient Air Pollution Control Equipment (APCE) like Bag House at Cement Mill and Bag filters at various transfer points are being / will be installed to keep the emissions within the permissible limits.
- Routine maintenance of APCEs.
- Automatic shutdown will take place due to non-working of APCE.
- Hence, the overall quality of the ambient air is being / will be maintained within the limit prescribed by CPCB after the commencement of the operation of Proposed Expansion project.

D. MITIGATION MEASURES FOR NOISE QUALITY

- Increase in noise levels within the project area, which is being / will be generated from the Machineries and equipment such as Cement mill, compressors, pumps and motors and D.G. Set; and from transportation activities.
- Hence, the noise generated will cause a significant impact on workers and surrounding area and if exceeds the permissible levels for a continuous period of time, this will reduce the labour productivity and would also lead to loss of attention/concentration resulting in accidents.
- Equipment proposed to be installed will be designed to confirm occupational noise levels prescribed by regulatory agencies.
- Machine operators and Persons working close to machine are being / will be provided with personal protective equipment viz. Ear plugs / Ear muffs etc.
- Proper maintenance, oiling and greasing of machines at regular intervals is being / will be done to reduce generation of noise.

- D.G. Set has been installed in acoustic enclosure to suppress the noise and vibration generated during operation of D.G. Set.

E. MITIGATION MEASURES FOR WATER QUALITY

- The quantity of ground water required for existing plant is 200 KLD and no additional water will be required for proposed expansion as existing water permission of 200 KLD is sufficient to meet the requirement for proposed expansion.
- Standalone Grinding unit is/will be based on the dry process technology.
- Total domestic waste water is estimated to be 7 KLD generated from office toilets and canteen is being/will be treated in the STP of capacity 10 KLD (Existing) and treated water 6KLD is being used/ will be used in green belt development and plantation.
- Water used for cooling at various stages of cement manufacturing will be partially evaporated and partially recycled; hence, no waste water is being/will be discharged outside the plant premises.
- RO reject (2 KLD) is being/will be used in dust suppression.
- Total Sewage sludge is estimated to be (0.8 kg/day/ 0.264 TPA) will be generated from STP and the same will be used as manure in greenbelt development/plantation.
- Regular monitoring of water quality is being/will be carried out. Training and awareness programmes on water conservation measures will also be organized for the locals.

F. MITIGATION MEASURES FOR SOIL QUALITY

- Efficient Air Pollution Control Equipment (APCE) like Bag House / Bag Filter has been / will be installed at all major stacks to keep the emissions within 30 mg/Nm3.
- Adequate stack height has been considered to minimize dust emissions and proper dispersion.
- Waste water is being / will not be discharged outside the grinding unit premises.
- A horticulturist has been engaged who is ensure soil quality improvement in the plant area, by adequate manuring and fertilizing. Therefore, no adverse impact on the soil quality of the area is anticipated.
- Besides, soil samples are being / will be collected and tested at regular intervals from the nearby areas. This will help in mitigation of any harmful impact on soil due to the proposed expansion project activity, if any.

G. MITIGATION MEASURES FOR BIOLOGICAL DIVERSITY

- Particulate matter emission beyond the threshold limit may cause migration of wild animals and birds.
- Increased noise level beyond the threshold limits due to running of machinery may scare the wild fauna and force them to migrate to other areas.
- Increase in vehicular & human movements in the area may cause changes in the habitat of the fauna.
- Fugitive emissions (dust) beyond the threshold limit may impact the terrestrial flora. The settlement of dust on the laminar surface of plants can impede the efficiency of photo-transduction

and thereby, affect the productivity of plants. In some of the plant, it may also smother the leaf surface blocking stomata, resulting in reduced transpiration.

- Scaling up the greenbelt development & plantation in and around the Plant site to control the spread of particulate emission and noise.
- Efficient Air Pollution Control Equipment (APCE) have been/ will be installed to keep the emissions within the permissible limits.
- Using paved roads for transportation to minimize fugitive emissions.
- Material transport in covered truck and storing it under tarpaulin cover.
- Transport vehicles and machinery is being/ will be properly maintained and periodically checked for pollution level to reduce noise and gaseous emission in the surrounding environment.

CHAPTER: IV

a) INTERVENTIONS MUST BE CARRIED OUT BY THE PROJECT'S AUTHORITY INSIDE THE PROJECT AREA (CORE AREA) AND BE PROPERLY JUSTIFIED SUGGESTED MEASURES:

INTERVENTIONS INSIDE PLANT AREA (TO BE IMPLEMENTED BY THE PROJECT AUTHORITIES):

The following steps will be taken within the project area.

I. AIR POLLUTION CONTROL MEASURES

Anticipated impacts-

- The main sources of dust emission are the movement of equipment at site, leveling, grading, earthwork and foundation works.
- Exhaust emissions from vehicles and equipment to be deployed during construction phase, is also likely to result in marginal increase in the levels of PM and un-burnt hydrocarbons.
- Loading and unloading of construction material and debris will also affect the ambient air quality.
- The impact will be for short duration. This will be confined within the project boundary including additional land. The impact will, however, be reversible, marginal and temporary in nature.

Mitigation measures-

- No site clearing and site preparation is required as the expansion will be done through process optimization in existing cement mill including installation of silos for cement & packer in packing plant. therefore, dust emission will be minimal and will be confined to plant only.
- Vehicles having PUC certificate is being/will be deployed during the construction & operation activity to reduce exhaust emission.
- Sprinkling of water on construction site (i.e., Silos, packing plant & truck parking area) and on unpaved roads is being/will be done during the expansion of grinding unit.
- Material are/will be loaded and unloaded by trained workers and proper enclosures have been/will be provided during loading and unloading. the vehicles and the materials are being/will be stored at their designated place with suitable covering.
- All the vehicles carrying raw materials for construction will be properly covered with tarpaulin to abolish the fugitive emissions along with proper upkeep and maintenance of vehicles.
- In addition to above, dust will also be generated from stockpiles of construction material (aggregates and sand). To prevent this, stockpiles will be aligned properly with slopes stabilized and maximum height will be maintained.
- 1 bag house has been installed at existing cement mill (VRM) and Bag filters (25 nos. (existing) + 4 nos. (proposed) have been/ will be installed at all material transfer points.
- Clinker, fly ash and Cement is being/ will be stored in the silos.

- Gypsum, slag & limestone is being/ will be stored in the covered sheds.
- Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt & plantation in accordance with CPCB guidelines. Company will develop plantation as per Miyawaki plantation in the plant premises.
- Regular cleaning and sweeping of roads and nearby area of storage facilities will be done by vacuum sweeping machine.
- Continuous Emission Monitoring System (CEMS) has been installed to assess the quality of the stack emission.
- Efficient Air Pollution Control Equipment (APCE) like Bag House at Cement Mill and Bag filters at various transfer points are being / will be installed to keep the emissions within the permissible limits.
- Routine maintenance of APCEs.
- Automatic shutdown will take place due to non-working of APCE.
- Hence, the overall quality of the ambient air is being / will be maintained within the limit prescribed by CPCB after the commencement of the operation of Proposed Expansion project.

II. NOISE POLLUTION CONTROL MEASURES

Anticipated impacts-

- Increase in noise level due to construction equipment.
- During construction phase, noise will be generated due to following activities / processes:
- Movement /operation of transport and construction vehicles / equipment.
- Transportation of equipment, materials and people.
- Other important activities involved in construction stage such as earth moving, compaction, concrete mixing, crane operation, steel erection, mechanical / electrical installation.
- The noise generation during construction phase will be temporary and will be limited to the plant site.
- Increase in noise levels within the project area, which is being / will be generated from the Machineries and equipment such as Cement mill, compressors, pumps and motors and D.G. Set; and from transportation activities.
- Hence, the noise generated will cause a significant impact on workers and surrounding area and if exceeds the permissible levels for a continuous period of time, this will reduce the labour productivity and would also lead to loss of attention/concentration resulting in accidents.

Mitigation measures-

- Equipment proposed to be installed will be designed to confirm occupational noise levels prescribed by regulatory agencies.
- Machine operators and Persons working close to machine are being / will be provided with personal protective equipment viz. Ear plugs / Ear muffs etc.

- Proper maintenance, oiling and greasing of machines at regular intervals is being / will be done to reduce generation of noise.
- D.G. Set has been installed in acoustic enclosure to suppress the noise and vibration generated during operation of D.G. Set.

III. WATER POLLUTION CONTROL MEASURES

Anticipated impacts-

- There will be decrease in ground water level due to proposed expansion.
- There will be increase in suspended solids due to soil run-off during heavy precipitation due to loosen soil at construction site.

Mitigation measures-

- The total existing water requirement is 200 KLD and there is no additional water requirement; which will be sourced from groundwater and STP treated water.
- No additional water will be required for proposed expansion as existing water permission of 200 KLD is sufficient to meet the requirement for proposed expansion.
- Storm water drains will be made immediately after starting construction activity. The drains will be properly aligned in conformity with the site drainage pattern so that the alteration is kept to the minimum and flooding or soil erosion does not occur.
- The waste water generated during construction phase will be treated in existing STP and treated water will be utilized in greenbelt development & plantation.
- The quantity of ground water required for existing plant is 200 KLD and no additional water will be required for proposed expansion as existing water permission of 200 KLD is sufficient to meet the requirement for proposed expansion.
- Standalone Grinding unit is/will be based on the dry process technology.
- Total domestic waste water is estimated to be 7 KLD generated from office toilets and canteen is being/will be treated in the STP of capacity 10 KLD (Existing) and treated water 6KLD is being used/ will be used in green belt development and plantation.
- Water used for cooling at various stages of cement manufacturing will be partially evaporated and partially recycled; hence, no waste water is being/will be discharged outside the plant premises.
- RO reject (2 KLD) is being/will be used in dust suppression.
- Total Sewage sludge is estimated to be (0.8 kg/day/ 0.264 TPA) will be generated from STP and the same will be used as manure in greenbelt development/plantation.
- Regular monitoring of water quality is being/will be carried out. Training and awareness programmes on water conservation measures will also be organized for the locals

IV. SOIL POLLUTION CONTROL MEASURES

Anticipated impacts-

- Impact on soil during construction would be mainly due to the left out of construction material used which are as below:

- Soil Compaction - Compaction is a common problem during the construction activity due to the movement of large number of heavy machineries over the soil.
- Soil Contamination - Due to the accumulation of cement, used for construction purpose, on the top soil results in the lack of oxygen and hence, reducing the soil porosity.
- Soil Degradation - Soil stockpiling during the construction phase will increase the risk of mixing of top soil with the sub-soil components & other construction material, thereby reducing its quality.
- The soil of the area may get affected due to operational activities, if proper care is not taken. Degradation of soil quality will take place due to settling of air borne dust.
- Changes in soil texture due to settling of air borne dust or due to wash off of solid particulates by surface water. This will lead to change in porosity, permeability and other physical characteristics of soil of the area.
- Changes in soil chemistry due to addition of foreign material from polluted air and water due to unit activities in the area.

Mitigation measures-

- Proper design, planning and good site management to minimize wastage of materials such as concrete, mortars and cement grouts.
- Construction wastes will be segregated and stored at plant site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.
- Litter disposal and collection points will be established around the work sites.
- Empty packaging materials, drums, glass, tin, paper, plastic, pet bottles, wood, thermocol and other packaging materials, etc. will be disposed through recyclers (locally called kabadis) from time to time.
- No material will be dumped outside the plant premises.
- Efficient Air Pollution Control Equipment (APCE) like Bag House / Bag Filter has been / will be installed at all major stacks to keep the emissions within 30 mg/Nm3.
- Adequate stack height has been considered to minimize dust emissions and proper dispersion.
- Waste water is being / will not be discharged outside the grinding unit premises.
- A horticulturist has been engaged who's ensure the soil quality improvement in the plant area, by adequate manuring and fertilizing. Therefore, no adverse impact on the soil quality of the area is anticipated.
- Besides, soil samples are being / will be collected and tested at regular intervals from the nearby areas. This will help in mitigation of any harmful impact on soil due to the proposed expansion project activity, if any.

V. BIOLOGICAL ENVIRONMENT CONTROL MEASURES

Anticipated impacts-

- Particulate matter emission beyond the threshold limit may cause migration of wild animals

and birds.

- Increased noise level beyond the threshold limits due to running of machinery may scare the wild fauna and force them to migrate to other areas.
- Increase in vehicular & human movements in the area may cause changes in the habitat of the fauna.
- Fugitive emissions (dust) beyond the threshold limit may impact the terrestrial flora. The settlement of dust on the laminar surface of plants can impede the efficiency of photo-transduction and thereby, affect the productivity of plants. In some of the plant, it may also smother the leaf surface blocking stomata, resulting in reduced transpiration.

Mitigation measures-

- Scaling up the greenbelt development & plantation in and around the Plant site to control the spread of particulate emission and noise.
- Efficient Air Pollution Control Equipment (APCE) have been/ will be installed to keep the emissions within the permissible limits.
- Using paved roads for transportation to minimize fugitive emissions.
- Material transport in covered truck and storing it under tarpaulin cover.
- Transport vehicles and machinery is being/ will be properly maintained and periodically checked for pollution level to reduce noise and gaseous emission in the surrounding environment.

VI. SOCIO ECONOMIC MANAGEMENT PLAN

- 294 nos. of people have been employed and additionally About 161 nos. of people will get employment during the Implementation & Operation Phase of proposed expansion. Preference will be given to the local people as per their eligibility and projects requirement.
- Apart from the above, various indirect employment opportunities are envisaged by way of network of retailers (cement stockists) throughout the state and in its marketing regions, transportation, workshops, petty contractors; shopkeepers etc. Thus, the project will have positive impact on the employment pattern of the region.
- Due to proposed expansion project, influx of working community will generate an indirect employment through development of nearby market/ shops, trade centers, activities, transportation etc.
- The toilets have already built along with adequate water supply to keep hygiene within plant.
- Awareness program is being/will be conducted before the monsoon season regarding the spread of water borne/ vector diseases.
- Services for spraying of Mosquito repellents is being/will be provided in the nearby villages and at construction site to avoid the spread of diseases.
- To overcome behavioral impact, proper site in charge with timely supervision is being/will be done. In advance, facilities with equipped medical and safety services are being/will be provided to take a control over the incident/violence if any caused.

- In advance, emergency cell has already formed with fully equipped communication system, medical and safety services to take control over the incident/violence caused
- In order to mitigate the health impacts, efficient Air Pollution Control Equipment (APCE) like Bag House / Bag Filter has been / will be installed at all major stacks to keep the emissions within the permissible limits.
- To reduce fugitive emission, vehicles and machineries will be regularly maintained.
- CEMS have been installed at major stack for manual pollution under check.
- For emergency, first aid center is being/will be established for its employees.
- Regular health -checkup plans can be organized.
- Proper sanitation measures should be taken.

VII. GREENBELT DEVELOPMENT & PLANTATION PROGRAMME

As per CPCB guidelines for developing greenbelt dated March 2000, *"Green belts are thought to be effective in such scenarios where green plants form a surface capable of sorbing air pollutants and forming sinks for pollutants Leaves with their vast area in a tree crown, sorbs pollutants on their surface, thus effectively reduce their concentrations in the ambient air. Often, the sorbed pollutants are Incorporated in metabolic stream and thus the air is purified. Plants grown in such a way as to function as pollutant sinks are collectively referred to as green belts".*

ꕥ Objective

Greenbelt is a set of rows of trees planted such a way that they form an effective barrier between the plant and the surroundings. The main purpose of green belt development is to contribute to the following factors:

- To attenuate noise levels generated from the plant;
- To improve the aesthetics of the Project area;
- To trap the vehicular emissions and fugitive dust emissions;
- To maintain and improve biodiversity;
- To prevent soil erosion and to protect the natural vegetation;
- Provision of wide greenbelt around the plant has been foreseen to reduce any adverse impacts on the surrounding population due to emissions from the proposed plant. Plantation of grass, flowers, bushes and trees will be taken-up to reduce generation of dust from bare earth and to enhance the aesthetic/ scenic value.

ꕥ Guidelines for Greenbelt Development

Following guidelines will be followed for the greenbelt development in the Project area.

- All the barren areas will be vegetated.
- Trees growing to a height of 5 m or more will be planted.
- Plantation of trees will be undertaken in and around the area in alternating rows to prevent horizontal pollution dispersion.
- Trees will be planted along roadsides, to arrest auto-exhaust and noise pollution, and in such a way that there is no direct line of sight to the installation when viewed from a point outside

the foliage perimeter.

- Since tree trunks are normally devoid of foliage (up to 3 m), it is appropriate to have shrubbery in form of such trees to give coverage to this portion.
- Fast growing trees with thick perennial foliage will be grown, as it takes many years for trees to grow to their full height.
- In order to facilitate the proper growth of vegetation, limited measures involving preparation of seedbed with suitable amount of fertilizers and treatment with mulches will be done.

Benefits of Greenbelt Plantation

- Stabilizing erodible slopes to minimize pollution
- Control of dust
- Enhancement of aesthetic value
- Minimizing evapo-transpiration loss which helps to recharge ground water in the area
- Reducing noise.

Greenbelt & Plantation Programme

- Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt development / plantation in accordance with CPCB guidelines and as per the Miyawaki Method of Plantation. Out of which; 2.0932 ha area (with 8000 Nos. of saplings) has already been developed. Further 3000 saplings will be planted on additional land for proposed expansion & gap filling will be done to maintain the density of 2500/ha.
- The proposed greenbelt development & plantation area will be developed in upcoming 3 years with 3000 numbers of trees with density of plantation is 2500 trees per ha.

Table 25 Year wise plantation

S. No.	Year Wise plantation after EC & CTE	Area in ha.	Numbers of Plantation	Survival Rate
1.	1st year	0.59	1000	90%
2.	2nd year	0.59	1000	90%
3.	3rd year	0.59	1000	90%
Total		**1.77**	3000	**90%**

BUDGETARY PROVISION FOR ENVIRONMENT MANAGEMENT PROTECTION

The budget proposed for the Stand-alone grinding unit and that for the environmental protection measures is given as below:

Capital Cost for the Project: Rs. 35.5 Crores

Cost for Environmental Protection Measures:

- ✓ Capital Cost: Rs. 86.0 Lakhs
- ✓ Recurring Cost: Rs. 39.2 Lakhs / annum

CHAPTER: V

PROPOSED MANAGEMENT STRATEGIES WITHIN THE BUFFER AREA OF 2.5 KM IDENTIFIED AROUND THE PROJECT AREA AND INCLUDE FOLLOWING POINTS:

a) Interventions to be implemented by the project authorities inside the project area (buffer area) with suitable justifications

Implementing a wildlife conservation plan for the proposed project site at Taluka & District: Hamirpur (Uttar Pradesh) requires careful consideration of the surrounding ecosystem and potential impacts on wildlife. Measures that the Divisional Forest Officer (DFO) could consider for the implementation of a buffer zone wildlife conservation plan:

Methodology

To achieve the above goals of vision following methodology can be adopted by Forest Department:

- As a responsible company undertaking the proposed project in Hamirpur (Uttar Pradesh), company priority lies in ensuring the safety and conservation of wildlife in the surrounding areas. company commitment to environmental stewardship drives our efforts to implement comprehensive measures aimed at safeguarding wildlife throughout the project lifecycle.
- To initiate this process, thorough habitat assessments and mapping exercises was conducted to identify critical wildlife habitats, migration routes, and ecological corridors in the project vicinity. This understanding will inform the establishment of buffer zones around the project site, designed to mitigate potential disturbances to wildlife habitats and ensure ecological connectivity. Collaboration with environmental experts and regulatory authorities will guide the determination of the size and boundaries of these buffer zones, incorporating habitat requirements of key wildlife species and the extent of potential project impacts.
- In addition to establishing buffer zones, a range of wildlife monitoring and management programs will be implemented.
- Commitment to wildlife safety extends to the design and construction phases of the project. Wildlife-friendly fencing along roads and infrastructure will be installed to prevent collisions between vehicles and animals. Additionally, underpasses or wildlife crossings will be incorporated into the project design to facilitate safe passage for wildlife across roads and highways, thereby reducing the risk of road accidents involving wildlife.
- Throughout the project lifecycle, stakeholder engagement and community involvement in wildlife conservation efforts will be prioritized. Collaboration with local communities, stakeholders, and indigenous groups will raise awareness about the importance of wildlife conservation and the role of buffer zones in safeguarding biodiversity. Education and outreach initiatives will empower stakeholders to become stewards of wildlife safety in their communities.
- Commitment to wildlife safety will be upheld through rigorous enforcement of legal protections and adherence to environmental regulations. Protected areas, wildlife reserves, and conservation easements will be established to safeguard critical habitats and biodiversity hotspots. Collaboration with government agencies, non-governmental organizations, and conservation partners will leverage resources, expertise, and funding for wildlife conservation initiatives.
- By integrating these measures into our wildlife conservation plan, we demonstrate our commitment to responsible environmental management and sustainable development. Recognition of the importance of wildlife safety in promoting the long-term health and resilience of ecosystems in the project area underpins our dedication to upholding the highest standards of conservation excellence throughout the project lifecycle.

- Specialized training programs will be conducted for machinery operators and drivers, emphasizing the importance of maintaining appropriate speeds and exercising utmost caution when encountering wildlife, particularly in proximity to forest areas.
- Strict adherence to the use of vehicles with valid and up-to-date Pollution Under Control (PUC) certificates will be ensured for all project-related activities.
- Close collaboration and coordination with the Forest Department will be established to facilitate the construction of essential infrastructure, allocation of veterinary funds, provision of ambulances equipped with cages, and the establishment of dedicated rescue wards. These measures aim to actively contribute to the conservation and protection of wildlife.

HABITAT IMPROVEMENT AND PROTECTION

The preservation and enhancement of habitat play a vital role in providing essential food and shelter for wild animals. Efforts will be made to develop and maintain a favourable habitat that not only supports the targeted wildlife species but also promotes conditions conducive to the presence of other prey animals. This comprehensive approach aims to create a thriving ecosystem that benefits the entire wildlife community.

Mitigation Strategy

- The study area within the buffer zone does not include any areas such as National Parks, Tiger/Elephant Reserves, or Biosphere Reserves.
- In collaboration with the Forest Department, the project proponent will develop tree groves with plantations to support wildlife conservation efforts. This includes ensuring the proper maintenance, watering, and replacement of plants as necessary.
- The responsibility for maintaining the habitat lies with the Forest Department, who will oversee its preservation and protection.
- The project proponent will play a role in assisting and educating local villagers and communities about the importance of habitat conservation.
- Special attention is given to training project drivers and laborers to avoid any damage to wildlife habitats or nests, ensuring their preservation and well-being.
- The rapid growth of human and cattle populations has led to the shrinking of natural wildlife habitats. This reduction in habitat areas has become a major disturbance for wild animals, compounded by the declining forest density.
- Recognizing the vital interdependence between forests and wildlife, concerted efforts will be made to restore and maintain degraded forests in collaboration with local Village Forest Management Committees (VFMCs) and non-governmental organizations (NGOs). It is essential to protect the degraded forests and preserve water resources for the well-being of wild animals. This includes developing and safeguarding habitats and shelters, ensuring their protection from threats such as fire, uncontrolled grazing, hunting, and the spread of diseases from cattle.

- A delicate food chain system exists between carnivores and herbivores, with carnivores preying on herbivores and small animals, while herbivores rely on fodder from grass fields and forests. By safeguarding and enhancing these interconnected ecosystems, we can ensure the survival and thriving of wildlife species.
- Carnivores → Herbivores → Grasses or Small fodder Fruits←Agriculture← Man
- The habitat serves as the natural home for wildlife within forest areas. It provides a territory where wild animals can roam without fear, engage in independent breeding activities, and access food, fodder, and water even during challenging times. It is a space where they can find solace and rest without disturbances. In degraded forest areas, strategic planting in open patches is essential to facilitate the development of forested regions. Additionally, the construction of anicuts, under the guidance of the Forest Department, will enhance water availability in these forested areas. To combat soil erosion, the implementation of check dams and guli plugging measures is necessary within the buffer area. Notably, Village Forest Protection Committees have emerged as crucial stakeholders in the safeguarding of flora and fauna. These committees diligently monitor the forests day and night, protecting against fires and the hunting of wild animals within the designated area. Their dedicated efforts contribute significantly to the conservation of wildlife and the preservation of the natural ecosystem.

IMPROVEMENT OF WATER AVAILABILITY

- "Water" is the daily requirement of all wild animals. The scarcity of water leads to the migration of wild animals from forest area towards human population and thus increasing dangers to the human & cattle life by way of man-animal conflict and attracts poaching also.
- Annual repair and maintenance of existing anicuts, talai (small reservoirs), and water ponds will be conducted in consultation with the Forest Department before the onset of the rainy season.
- Creation of small mud ponds will be undertaken to enhance water availability and create additional drinking water sources for wildlife.
- Adequate measures will be taken to ensure the availability of water in ponds and other avedas (drinking water bodies for cattle) during periods of water scarcity, ensuring the well-being of both wildlife and domestic animals.

PROTECTION OF PASTURE LAND

The detrimental effects of overgrazing on pasturelands have led to a scarcity of fodder for wild animals. It is crucial to focus on the improvement and protection of pasturelands to address this issue within the study area. By implementing measures to restore and safeguard these valuable grazing areas, the conditions for wildlife can be adequately met.

CONTROLLED GRAZING

Uncontrolled grazing poses a significant threat to the habitats of wild animals. To ensure the conservation and preservation of these habitats, it is imperative to implement controlled grazing practices. Villagers will be educated about the adverse effects of over grazing in collaboration with the Forest department. This educational initiative aims to raise awareness among the local

community and promote responsible grazing practices that supports the well-being of wildlife and their habitats.

- **PROTECTION AGAINST FIRE**

Generally, fire occurs in summer season. The local people use to take smoking bidi and cigarettes into the roads and scrub vegetation and throw them there which cause fire. The dry grass catches the fire and in no time, fire spreads in the area. However, fire accidents in forest are severe, it destroys the forest as well as the habitat of wild animals. Fire kills the innocent wild animals and their cubs and chinks specially in nesting and breeding season.

- **PROTECTION AGAINST HUNTING**

The hunting of wild animals is strictly prohibited, both within and outside the forest, as per the prevailing regulations. Engaging in such activities is considered a punishable offense, and the local population must refrain from participating in any form of hunting. In particular, within the designated study area, hunting must be strictly disallowed to ensure the preservation of wildlife. To promote awareness and discourage offenses against wild animals, the Forest Department will organize informative and educational camps. These camps will specifically target laborers working in industries associated with the study area. Participants will receive guidance on the various offenses related to trapping, driving, snaring, capturing, killing, and poisoning wild animals. It will be emphasized that the collection or possession of any body part of a wild animal is strictly restricted and constitutes a non-bailable offense. It is crucial for the laborers to comprehend the gravity of their actions, as the consequences can be severe. Offenders found guilty of these offenses may face imprisonment for up to seven years as part of their punishment. By spreading awareness and ensuring that the local population understands the legal repercussions, we aim to foster a sense of responsibility and respect for the wildlife in the study area.

- **AWARENESS PROGRAMME**

Creating awareness among the local community is the most effective tool for wildlife safety and development. By understanding, loving, and protecting wildlife, individuals contribute to a healthier environment. Awareness campaigns, educational initiatives, and ethical practices are essential in preserving habitats, preventing illegal activities, and minimizing human-wildlife conflicts. Engaging the community through partnerships and promoting responsible behavior fosters a collective effort towards wildlife conservation and ensures a harmonious coexistence between humans and the natural world.

- **Nature Awareness Camps**: Regular nature awareness camps will be organized in the area, at least once a year for a period of five years. These camps aim to educate the local public about the importance of wildlife conservation and environmental preservation. This will be instilling a sense of responsibility and stewardship among the local community can foster a collective effort in safeguarding wildlife.
- **Awareness Activities**: Special awareness activities will be conducted during significant

events such as Wildlife Week (1st Oct to 7th Oct), World Forestry Day (21st March), and World Environment Day (5th June) each year. These activities may include painting and photography competitions, essay and slogan writing contests, as well as activities focused on tree and bird identification.

- **Distribution of Educational Materials**: Brochures and pamphlets highlighting nature and wildlife protection will be published and distributed during the awareness camps. These materials will provide guidance on how to safeguard wildlife and promote responsible behavior towards nature.

ꕥ **SLOGANS AND SIGNAGE:**

Eye-catching slogans and signage promoting wildlife and nature conservation will be prominently displayed throughout the core zone and within buffer zone (10-kilometer radius), especially along roadsides. These visual reminders aim to encourage the public to actively participate in wildlife conservation efforts.

ꕥ **WILDLIFE MONITORING**

The Company in collaboration with local forest department will conduct the yearly detailed report regarding the activities including photographs to the Forest Department or to the agency directed by the regulated authorities.

TABLE 26 MONITORING PLAN FOR CONSERVATION OF WILDLIFE AND BIODIVERSITY

Aspect	Objective	Monitoring Method	Frequency	Responsible Party
Habitat Quality	Evaluate the health and suitability of habitats	Habitat assessments, vegetation surveys	Bi-annual	Environment Officer
Human-Wildlife Interactions	Assess incidents of human-wildlife conflicts	Community reports, incident logs	Monthly	Environment Officer
Habitat Restoration	Evaluate the success of habitat restoration	Vegetation monitoring, habitat assessments	Bi-annual	Environment Officer
Plantation in study area	Plantation in nearby	Area brought under Plantation	Bi-annual	Environment Officer
		Number of trees planted, survived and established	Bi-annual	

ꕥ **ENVIRONMENTAL MANAGEMENT PLAN IS DETAILED UNDER THE FOLLOWING HEADS:**

- Air Quality Management, Noise Management and Waste Water Management
- Solid &Hazardous Waste Management Energy Conservation
- Greenbelt Development & Plantation Programme
- Occupational Health & Safety Measures

The environment management plan is as given below-

Table 27 Mitigation measures

Pollutants	Mitigation measures
Air Pollution	• No site clearing and site preparation is required as the expansion will be done through process optimization in existing cement mill including installation of silos for cement & packer in packing plant. therefore, dust emission will be minimal and will be confined to plant only. • Vehicles having PUC certificate is being/will be deployed during the construction & operation activity to reduce exhaust emission. • Sprinkling of water on construction site (i.e., Silos, packing plant & truck parking area) and on unpaved roads is being/will be done during the expansion of grinding unit. • 1 bag house has been installed at existing cement mill (VRM) and Bag filters (25 nos. (existing) + 4 nos. (proposed) have been/ will be installed at all material transfer points. Clinker, fly ash and Cement is being/ will be stored in the silos. Gypsum, slag & limestone is being/ will be stored in the covered sheds. • Continuous Emission Monitoring System (CEMS) has been installed to assess the quality of the stack emission. • Out of total plant area of 11.7412 ha; 33.02 % area i.e., 3.87 ha (Existing + proposed) has been / will be developed under greenbelt & plantation in accordance with CPCB guidelines.
Noise Pollution	• Equipment proposed to be installed will be designed to confirm occupational noise levels prescribed by regulatory agencies. • Machine operators and Persons working close to machine are being / will be provided with personal protective equipment viz. Ear plugs / Ear muffs etc. • Proper maintenance, oiling and greasing of machines at regular intervals is being / will be done to reduce generation of noise. • D.G. Set has been installed in acoustic enclosure to suppress the noise and vibration generated during operation of D.G. Set.
Water Pollution	• The waste water generated during construction phase will be treated in existing STP and treated water will be utilized in greenbelt development & plantation. • The quantity of ground water required for existing plant is 200 KLD and no additional water will be required for proposed expansion as existing water permission of 200 KLD is sufficient to meet the requirement for proposed expansion. • Standalone Grinding unit is/will be based on the dry process technology. • Total domestic waste water is estimated to be 7 KLD generated from office toilets and canteen is being/will be treated in the STP of capacity 10 KLD (Existing) and treated water 6KLD is being used/ will be used in green belt development and plantation. • Water used for cooling at various stages of cement manufacturing will be partially evaporated and partially recycled; hence, no waste water is being/will be discharged outside the plant premises.

Pollutants	Mitigation measures
	• RO reject (2 KLD) is being/will be used in dust suppression. • Total Sewage sludge is estimated to be (0.8 kg/day/ 0.264 TPA) will be generated from STP and the same will be used as manure in greenbelt development/plantation.
Biological Environment	• Scaling up the greenbelt development & plantation in and around the Plant site to control the spread of particulate emission and noise. • Efficient Air Pollution Control Equipment (APCE) have been/ will be installed to keep the emissions within the permissible limits. • Using paved roads for transportation to minimize fugitive emissions. • Material transport in covered truck and storing it under tarpaulin cover. • Transport vehicles and machinery is being/ will be properly maintained and periodically checked for pollution level to reduce noise and gaseous emission in the surrounding environment.

The mitigation measures given in this section are for management of the emissions (particulate or gaseous), Noise pollution, solid waste and water pollution generated during the construction and operation phase to meet the environmental standards and environmental operating conditions.

- **SUPPORTING ACTIVITIES REQUIRED FROM THE STATE GOVERNMENT.**

After recommendation of Deputy Conservator of Forest of Hamirpur division proposal forward to Conservator of Forest, Chief Conservator of Forest and Principal Chief Conservator of Forest Uttar Pradesh/ Chief Wildlife Warden of Uttar Pradesh State.

- **REVIEW AND MONITORING OF WILDLIFE CONSERVATION PLAN**

The conservation plan proposed for the Schedule- I fauna in buffer area of project site should be monitored continuously to assess any short comings and to remediate further and implement the plan to achieve the goal for conservation and improvement of the wildlife population and its habitat. The team will review the progress and evaluate the works and submit reports periodically. The report should also suggest remedial measures for effective conservation and management of the threatened and Schedule - I faunal species. Every six months, a report along with the financial outlay and progress of work will be submitted to the concerned DCF/DFO.

- **FIELD MONITORING**

It will be difficult to assess the results and success of this proposed conservation plan unless the status of threatened and Schedule- I fauna, associated wild animals and its habitat are monitored on regular basis. This monitoring can be done scientifically through experienced wildlife experts / Institute / Organization with the support of department of forests and result needs to be evaluated for making course correction, if required. The field monitoring can be preferably done at the pre-monsoon period of the monitoring year.

- **SUCCESS INDICATORS**

Following factors will be undertaken as measurable indicators of success of the plan:

- Increase in vegetation density and ground cover in buffer area.
- Increase in population and abundance of rare, threatened and Schedule-I faunal species as

mentioned in the plan.

- Increase in population and abundance of biodiversity and other wildlife in the area.
- Overall health of the habitat and ecosystem in buffer areas.

ꕥ **JURISDICTION AND OVERSIGHT OF WILDLIFE CONSERVATION PLAN:**

Following the recommendation of the Deputy Conservator of Forest from Hamirpur (UP) Divisions, the proposal will be forwarded to the higher authorities within the Forest Department hierarchy. This plan falls under the jurisdiction of the Forest Department, with the District Forest Officer (DFO) Hamirpur (UP), as well as the Chief Wildlife Warden of Uttar Pradesh State, overseeing its implementation and management.

CHAPTER: VI
FINANCIAL IMPLICATIONS AND MONITORING

THE FINANCIAL FORECAST STATEMENT SHOULD DETAIL THE FINANCIAL OUTLAY FOR THE INTERVENTIONS TO BE IMPLEMENTED BY THE PROJECT AUTHORITIES WITHIN THE WCP AREA (CORE & BURIER SEPARATELY). THE ANNUAL WORK PROGRAMME AND ANNUAL OUTLAY FOR EACH COMPONENT SHOULD BE CLEARLY GIVEN IN A TABLE. IT SHOULD ALSO INCLUDE MONITORING AND EVALUATION ARRANGEMENTS FOR THE ACTIVITIES UNDERTAKEN

The company has allocated amount mentioned below for the Wildlife Conservation Plan encompassing various activities mentioned above. These activities, aimed at enhancing habitat improvement, raising awareness, conducting research, and fostering collaboration with the forest department, will be meticulously executed over the course of ten years. The company is committed to ensuring the success of these initiatives by closely working with the forest department, leveraging their expertise and resources to

maximize the positive impact on biodiversity conservation. Through this collaborative effort, the company aims to contribute significantly to the protection and preservation of wildlife and their habitats, fostering a sustainable environment for future generations

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Table 28 THE FINANCIAL OUTLAY FOR THE INTERVENTIONS TO BE IMPLEMENTED WITHIN THE WCP AREA (BUFFER ZONE)

Sr. No.	Particular	Name of the area	Type of Area	Proposed Amount for Item Wise		
				Qt.	Rate (Rs.)	Amount (Rs. Lacs)
1.	**Habitat improvement and mitigative measures (Food, Water, Shelter, Movement etc.) and measures to reduce/ minimize the human- animal conflicts**					
a.	Plantation of different habitation area with planting of 500 saplings of Neem, Siris, Bad, Gular, Pipal, Mango, Guava, Amla, Ber & Shady trees in each area @ 300 Rs. Per plant for 5 years	3 km study area Village: Ingohata, Itara, Sumerpur, Chand Purwa Buzurg	Local Community Land	500	300	1.5
b.	Road side Plantation on Both Sides	SH-34	Local Community Land	200	300	0.6
c.	Establishment of solar tubewell, Vermi compost unit, Water tank (GLR) and Pucca bed	Hamirpur (Uttar Pradesh) Forest Nursery	Govt. Land	1	40,000	0.4
d.	Soil and water conservation	10 km study area	Forest & Govt. Land	2	50,000	1
e.	Construction of sub-surface barrier	SH-34	Govt. Land	2	20,000	0.4
					Sub Total	**3.9**
2.	**Awareness and Extension (Forest staff will also be invited for various activities to ensure participation)**					
a.	Construction of Wildlife Interpretation Center with solar system	Hamirpur (Uttar Pradesh) (Forest and Wildlife)	Forest Land	1	1,00,000	1
b.	Training	10 km study area for 5 Years	Study Area	1	15000	0.15
c.	Seminar	10 km study area for 5 Years	Study Area	1	15000	0.15
d.	Camping	10 km study area for 5 Years	Study Area	1	20000	0.2
e.	Celebration of wildlife week	10 km study area for 5 Years	Study Area	1	10000	0.1
f.	Presentation and Photography	10 km study area for 5 Years	Study Area	1	10000	0.1
g.	Intelligence gathering	10 km study area for 5 Years	Study Area	1	5000	0.05
h.	Prevention of Poaching	10 km study area for 5 Years	Study Area	1	10000	0.1
i.	Celebration of important Wildlife species days	10 km study area for 5 Years	Study Area	1	10000	0.1
j.	Sinages & Slogans	10 km study area for 5 Years	Study Area	1	5000	0.05
k.	Cost of projector & Photography Machine etc.	10 km study area for 5 Years	Study Area	1	10000	0.1
					Sub Total	**2.1**

Sr. No.	Particular	Name of the area	Type of Area	Proposed Amount for Item Wise		
				Qt.	Rate (Rs.)	Amount (Rs. Lacs)
3.	**Support to Forest Department for monitoring, rescue and rehabilitation of Wildlife (Veterinary care, animal health, rescue, tools, and equipments etc.)**					
a.	Purchase of Tranquilization Gun with accessories	10 km study area	Forest Area	1	1,00,000	1
b.	Purchase of Rescue Items	Hamirpur (Uttar Pradesh)	Forest Area	1	50,000	0.5
c.	Maintaince of Veterinary Ambulance	Hamirpur (Uttar Pradesh)	Forest Area	1	50,000	0.5
d.	Maintaince of Bolero Camper	Hamirpur (Uttar Pradesh)	Forest Area	1	50,000	0.5
e.	Veterinary Services	Hamirpur (Uttar Pradesh)	Forest Area	1	25,000	0.25
f.	Assistance for Wild fauna	Hamirpur (Uttar Pradesh)	Forest Area	1	25,000	0.25
g.	Monitoring and Evaluation Cost	Hamirpur (Uttar Pradesh)	Forest Area	1	50,000	0.5
h.	Closure and water facilities for Rehabitation	Hamirpur (Uttar Pradesh)	Forest Area/ Govt. Land	1	50,000	0.5
i.	Construction of Water Conservation Structures (Gazlar, Anicut, MPT, PT Waterholes, Nadi, Talai, WHS etc. in forest Areas)	-	Forest Area/ Govt. Land	1	50,000	0.5
					Sub Total	**4.5**
4.	**Miscellaneous including Eco-Development**					
a.	Construction and restoration of Birds Nesting Zone	10 km study area	Forest Area and Govt. Land	1	50,000	0.5
b.	Grassland development	10 km study area	Forest Area and Govt. Land	1	50,000	0.5
c.	Habiatatat Improvement Amphibians	10 km study area	Forest Area and Govt. Land	1	50,000	0.5
d.	Facilities for Avi fauna	10 km study area	Project & Forest Area	1	50,000	0.5
e.	Facilities for Reptiles	10 km study area	Project & Forest Area	1	50,000	0.5
f.	Facilities for Mammals	10 km study area	Project & Forest Area	1	50,000	0.5
g.	Miscellaneous including Purchase of computer system, Photocopy machine, Projector, Binocular, Camera, Petrol, Diesel and other expenses	10 km study area	Forest Area	1	50,000	0.5
					Sub Total	**3.5**
Grand Total				**Rs.**	**14**	**Lacs**

Table 29 WILDLIFE CONSERVATION PLAN WILL BE IMPLEMENTED WITHIN THE TIMELINES FOR A PERIOD OF 5 YEARS

Year	Habitat improvement and mitigative measures (Food, Water, Shelter, Movement etc.) and measures to reduce/ minimize the human- animal conflicts	Awareness and Extension (Forest staff will also be invited for various activities to ensure participation)	Support to Forest Department for monitoring, rescue and rehabilitation of Wildlife (Veterinary care, animal health, rescue, tools, and equipments etc.)	Miscellaneous including Eco-Development	Total Rs. (Lacs)
Year 1	2.34	1.26	2.7	2.1	8.4
Year 2	0.78	0.42	0.9	0.7	2.8
Year 3	0.39	0.21	0.45	0.35	1.4
Year 4	0.234	0.126	0.27	0.21	0.84
Year 5	0.156	0.084	0.18	0.14	0.56
Total	3.9	2.1	4.5	3.5	14

CHAPTER: VII
MAPS AND ANNEXURES

It should include the maps / appendices / plans and cost schedules / relevant orders enclosed to the plan. On the request of the project proponent, DCF may supply the authenticated maps of the area for the purpose of integrating the details about the project and other details by them:

Annexures of Appended Area:

Annexure 1 Tor Letter

Annexure 2 Authenticated List of flora and fauna and Location Map by Divisional Forest Officer, Hamirpur, vide letter no. 3261/26-1/ dated 15.06.2024.

Maps of appended area:

1. Map Showing Distance and Direction of Environment Sensitivity from Plant Site.
2. Topo Map of Plant Site
3. Layout Plan of Proposed Plant Site
4. False Colour Map of Plant Site.
5. LULC Map of Plant Site.

Annexure 1

File No.: 9037

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Level Expert Appraisal Committee(SEAC), UTTAR PRADESH)

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Dated **06/06/2024**

To,

Mr. Bhaskar Singh Rawat
J K CEMENT LIMITED
JK Cement Limited, Kamla Tower, Kanpur Uttar Pradesh 208001, Kanpur, KANPUR NAGAR, UTTAR PRADESH, , 208001
bhaskar.rawat@jkcement.com

Subject: Grant of Standard Terms of Reference (ToR) to the proposed Project under the EIA Notification 2006-and as amended thereof-regarding.

Sir/Madam,

This is in reference to your application submitted to SEAC vide proposal number SIA/UP/IND1/476162/2024 dated 28/05/2024 for grant of Terms of Reference (ToR) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) ToR Identification No.	TO24B1103UP5449256N
(ii) File No.	9037
(iii) Clearance Type	Fresh ToR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	3(b) Cement plants
(vii) Name of Project	Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana-Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Limited.
(viii) Name of Company/Organization	J K CEMENT LIMITED
(ix) Location of Project (District, State)	HAMIRPUR, UTTAR PRADESH
(x) Issuing Authority	SEAC
(xii) Applicability of General Conditions	NO

3. The **SEAC** has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after detailed examination hereby decided to grant Standard Terms of Reference to the instant proposal of **M/s. J K CEMENT LIMITED** under the provisions of the aforementioned Notification.

4. The brief about products and by products as submitted by the Project proponent in Form-1 (Part A, B) and Standard Terms of Reference are annexed to this letter as Annexure (1).

5. The Ministry reserves the right to stipulate additional TORs, if found necessary.

6. The Standard Terms of Reference (ToR) to the aforementioned project is under provisions of EIA Notification, 2006 and as amended thereof. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7. The granted letter, all the documents submitted as a part of application viz. Form-1 Part A and Part B are available on PARIVESH portal which can be accessed by scanning the QR Code above.

Annexure 1

Standard Terms of Reference

1. Preliminary requirements

S. No..	Terms of Reference
1.1	EIA/EMP report cover page shall consists of project title with location, applicable schedule of the EIA Notification, 2006, ToR letter No. with date, study period along with EIA consultant & laboratory details with QCI/NABET/NABL accreditation certificate detail.
1.2	Besides, following points shall be compiled as per QCI/NABET norms: a. Disclaimer by the EIA consultant. b. Declaration by the Functional Area Experts contributed to the EIA study and declaration by the head of the accredited consultant organization/authorized person. c. Undertaking by the project proponent owning the contents (information and data) of the EIA/EMP report. d. Undertaking by the EIA consultant regarding compliance of ToR issued by MoEF&CC. e. Consultant shall submit the Plagiarism Certificate for the EIA/EMP Report.

2. Executive Summary

S. No..	Terms of Reference
2.1	Table of Contents of the EIA report including list of tables/figures/annexures/abbreviations/symbols/notations.
2.2	Point wise compliance to the ToR issued by MoEF&CC.

3. Executive Summary

3.1. Introduction

S. No..	Terms of Reference
3.1.1	Name of the project along with applicable schedule and category as per EIA, 2006.

S. No..	Terms of Reference
3.1.2	Location and accessibility

4. Executive Summary

4.1. Project description

S. No..	Terms of Reference
4.1.1	Resource requirements (Land; water; fuel; manpower)
4.1.2	Operational activity
4.1.3	Key pollution concerns

5. Executive Summary

5.1. Baseline Environment Studies

S. No..	Terms of Reference
5.1.1	Ambient air quality
5.1.2	Ambient Noise quality
5.1.3	Traffic study
5.1.4	Surface water quality
5.1.5	Ground water quality
5.1.6	Soil quality
5.1.7	Biological Environment
5.1.8	Land use
5.1.9	Socio-economic environment

6. Executive Summary

6.1. Anticipated impacts

S. No..	Terms of Reference
6.1.1	Impact on ambient air quality
6.1.2	Impact on ambient noise quality
6.1.3	Impact on road and traffic

S. No..	Terms of Reference
6.1.4	Impact on surface water resource and quality
6.1.5	Impact on ground water resource and quality
6.1.6	Impact on terrestrial and aquatic habitat
6.1.7	Impact on socio-economic environment

7. Executive Summary

7.1. Alternative analysis

S. No..	Terms of Reference
7.1.1	

8. Executive Summary

8.1. Environmental Monitoring program

S. No..	Terms of Reference
8.1.1	Ambient air, noise, water and soil quality
8.1.2	Noise quality management plan
8.1.3	Emission and discharge from the plant
8.1.4	Green Belt
8.1.5	Social Parameters

9. Executive Summary

9.1. Additional Studies

S. No..	Terms of Reference
9.1.1	Risk assessment
9.1.2	Public consultation
9.1.3	Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020

10. Executive Summary

10.1. Environment management plan

S. No..	Terms of Reference
10.1.1	Air quality management plan
10.1.2	Solid and hazardous waste management plan
10.1.3	Effluent management plan
10.1.4	Storm water management plan
10.1.5	Occupational health and safety management plan
10.1.6	Green belt development plan
10.1.7	Socio-economic management plan
10.1.8	Project cost and EMP implementation budget.

11. Introduction

S. No..	Terms of Reference
11.1	Background about the project
11.2	Need of the project
11.3	Purpose of the EIA study
11.4	Scope of the EIA study

12. Project description

12.1. Site Details

S. No..	Terms of Reference
12.1.1	Location of the project site covering village, Taluka/Tehsil, District and State.
12.1.2	Site accessibility
12.1.3	A digital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).
12.1.4	Latest High-resolution satellite image data having 1 m - 5 m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100 m all around the project location.
12.1.5	Environment settings of the site and its surrounding along with map.
12.1.6	A list of major industries with name, products and distance from plant site within study area (10km radius)

S. No..	Terms of Reference
	and the location of the industries shall be depicted in the study area map.
12.1.7	In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
12.1.8	In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
12.1.9	In case of canal/ nala/ seasonal drain and any other water body passing through project site, the PP shall submit the suitable steps /conservation plan/mitigation measures along with contouring, Run -off calculations, disposal etc. A robust and full proof Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided in the report.
12.1.10	Type of land, land use of the project site needs to be submitted.
12.1.11	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
12.1.12	Project proponent shall prepare Engineering layout plan showing all internal roads minimum 6 m width and 9 m turning radius for smooth traffic flow inside including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
12.1.13	Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including Rain Water Harvesting details with calculations mentioning about GW recharge along with relevant drawing.
12.1.14	A detailed report covering all aspects of Fire Safety Management and Fire Emergency Plan shall be submitted.
12.1.15	Details of drone survey for the site, needs to be included in report and presented before the EAC during appraisal of the project.

13. Project description

13.1. Forest and wildlife related issues (if applicable)

S. No..	Terms of Reference
13.1.1	Status of Forest Clearance for the use of forest land shall be submitted.
13.1.2	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive

S. No..	Terms of Reference
	Zone, 10 km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.
13.1.3	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.
13.1.4	Wildlife Conservation Plan duly authenticated by the Competent Authority of the State Government for conservation of Schedule I fauna along with budget and action plan, if any exists in the study area.

14. Project description

14.1. Salient features of the project

S. No..	Terms of Reference
14.1.1	Products with capacities in Tons per Annum for the proposed project.
14.1.2	If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.
14.1.3	Site preparatory activities.
14.1.4	List of raw materials required and their source along with mode of transportation.
14.1.5	Other than raw materials, other chemicals and materials required with quantities and storage capacities.
14.1.6	Manufacturing process details along with process flow diagram of proposed units.
14.1.7	Consolidated materials and energy balance for the project.
14.1.8	Total requirement of surface/ ground water and power with their respective sources, status of approval.
14.1.9	Water balance diagram
14.1.10	Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.
14.1.11	Man-power requirement.
14.1.12	Cost of project and scheduled time of completion.
14.1.13	In case of expansion projects, project proponent shall submit structural stability certificate showing whether existing structure withstand for proposed expansion activity.
14.1.14	Brief on present status of compliance (Expansion/modernization proposals) a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out. b. Cumulative Impact Assessment need to be carried out by greenfield projects considering the nearby

S. No..	Terms of Reference
	industries. c. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next two years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source. d. Copy of all the Environment Clearance(s) including Amendments/validity of extension/transfer of EC, there to obtained for the project from MoEF&CC/SEIAA shall be attached as Annexures. A Certified Compliance Report (CCR) of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change/ or concerned authority as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided. A Certified Compliance Report (CCR) issued by the concerned Authority shall be valid for a period of one year from the date of inspection. e. In case the existing project has not obtained Environment Clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. A proper justification needs to be submitted along with documentary proof. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 1994 or 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of CTO from the Regional Office of the SPCB shall be submitted, as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022. CCR on CTO conditions issued by the concerned SPCBs/PCCs shall be valid for a period of one year from the date of inspection of the project.

15. Description of the Environment

S. No..	Terms of Reference			
15.1	Study period			
15.2	Approach and methodology for data collection as furnished below			
	Attributes	**Sampling** Network	Frequency	**Remarks**
	Air Environment Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental • Lapse Rate	Minimum 1 site in the project impact area	hourly continuous	IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
	Pollutants • PM10	At least 8-12 locations	As per National Ambient Air Quality	• Sampling as per CPCB guidelines

S. No..	Terms of Reference		
	• SO2 • NOx • CO • HC • Other parameters relevant to the project and topography of the area	Standards,CPCB Notification.	• Collection of AAQ data (except in monsoon season) • Locations of various stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
	Noise Hourly equivalent noise levels	At least 8-12 locations	s per CPCB norms
	Water Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto plankton	Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association	

S. No..	Terms of Reference		
	• Zoo plankton For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • ElectricalConductivity	Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies	• Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)
	For Ground Water	Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.	
	Traffic Study Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project	Land Environment	
	Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR • Permeability Water holding capacity • Porosity	Soil samples be collected as per BIS specifications	
	Land use/Landscape • Location code		

S. No..	Terms of Reference
	• Total project area • Topography • Drainage (natural) Cultivated, forest,plantations, water bodies, roads and settlements Biological Environment 1. Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) 2. Terrestrial • Vegetation-species list, economic importance, forest produce,medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes socio-economic • Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while selecting forests. • Secondary data to collect from Government offices, NGOs, published literature.

S. No..	Terms of Reference

Demographic structure

- Infrastructure resource base
- Economic resource base
- Health status:Morbidity pattern
- Cultural and aesthetic attributes.
- Education

Socio-economic survey is based on proportionate, stratified and random sampling method.

- Primary data collection through questionnaire
- Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

Approach and methodology for data collection as furnished below

Attributes	Sampling		Remarks
	Network	Frequency	
Air Environment Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental • Lapse Rate	Minimum 1 site in the project impact area	hourly continuous	IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants • PM10 • SO2 • NOx • CO • HC • Other parameters relevant to the project and topography of the area	At least 8-12 locations	As per National Ambient Air Quality Standards,CPCB Notification.	• Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take

S. No..	Terms of Reference
	into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report. Noise Hourly equivalent noise levels — At least 8-12 locations — s per CPCB norms Water Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto plankton • Zoo plankton — Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 — Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies • Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)

S. No..	Terms of Reference
	• Boron • Sodium Absorption Ratio • ElectricalConductivity For Ground Water — Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included. Traffic Study Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project — Land Environment Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR • Permeability Water holding capacity • Porosity — Soil samples be collected as per BIS specifications Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) Cultivated, forest,plantations, water bodies, roads and settlements Biological Environment

S. No..	Terms of Reference
	1. Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) 2. Terrestrial • Vegetation-species list, economic importance, forest produce,medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes • Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while selecting forests. • Secondary data to collect from Government offices, NGOs, published literature. socio-economic Demographic structure • Infrastructure resource base • Economic resource base • Health status:Morbidity pattern • Cultural and aesthetic attributes. • Education Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

S. No..	Terms of Reference
15.3	Interpretation of each environment attribute shall be enumerated and summarized as given below: • Ambient air quality • Ambient Noise quality • Surface water quality • Ground water quality • Soil quality • Biological Environment • Land use • Socio-economic environment
15.4	The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

16. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

S. No..	Terms of Reference
16.1	Identification of potential impacts in the form of a matrix for the construction and operation phase for all the environment components **Activity** **Environment** **Ecological** **Socio-economic** Construction phase Operation phase
16.2	Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase • Details of stack emissions from the existing as well as proposed activity. • Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period • Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.
16.3	Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.4	Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.5	Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.6	Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.7	Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.8	Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.9	Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase

S. No..	Terms of Reference
16.10	Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.11	Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase

17. Analysis of Alternatives (Technology & Site)

S. No..	Terms of Reference
17.1	No project scenario
17.2	Site alternative
17.3	Technical and social concerns
17.4	Conclusion

18. Environmental Monitoring Program

S. No..	Terms of Reference
18.1	Details of the Environment Management Cell
18.2	Performance monitoring schedule for all pollution control devices shall be furnished.
18.3	Corporate Environment Policy a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA. c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.Page 9 of 10 d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
18.4	Action plan for post-project environment monitoring matrix: **Activity Aspect Monitoring Parameter Location Frequency Responsibility** Construction phase Operation phase

19. Additional Studies

S. No..	Terms of Reference
19.1	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
19.2	Details of adoption/ implementation status/plan to achieve the goal of Glasgow COP26 Climate Submit with regard to enhance the non-fossil energy, use of renewable energy, minimization of net carbon emission and carbon intensity with long-term target of "net Zero" emission.
19.3	Implementation status/measures adopted for avoiding the generation of single used plastic waste.
19.4	In cases the project is located in Critically and Severely Polluted Areas, additional mitigation measures adopted and detailed action plan to be submitted in the EIA/EMP Report as per MoEF&CC O.M. No. 22-23/2028-IA.III dated 31/10/2019 and MoEF&CC O.M. No. 22-23/2028-IA.III dated 5/07/2022 has to be submitted.
19.5	Public consultation details (Entire proceedings as separate annexure along with authenticated English Translation of Public Consultation proceedings).
19.6	As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
19.7	Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020 **S.No** / **Physical activity and action plan** (Name of the Activity / Physical Targets) / **Year of implementation (Budget in INR)** (1st / 2nd / 3rd) / **Total Expenditure (Rs. in Crores)**
19.8	Risk assessment • Methodology • Hazard identification • Frequency analysis • Consequence analysis • Risk assessment outcome
19.9	Emergency response and preparedness plan

20. Project Benefits

S. No..	Terms of Reference
20.1	Environment benefits
20.2	Social infrastructure
20.3	Employment and business opportunity
20.4	Other tangible benefits

21. Environment Cost Benefit Analysis

S. No..	Terms of Reference
21.1	Net present value
21.2	Internal rate of return
21.3	Benefit cost ratio
21.4	Cost effectiveness analysis

22. Environment Management Plan (Construction and Operation phase)

S. No..	Terms of Reference
22.1	Action plan for hazardous waste management
22.2	Action plan for solid waste management
22.3	Action plan for e-waste management.
22.4	Action plan for plastic waste management, considering the Plastic Waste Management Rules 2016.
22.5	Action plan for construction and demolition waste management.
22.6	Rain water harvesting plan
22.7	Plan for maximum usage of waste water/treated water in the Unit
22.8	Green belt development plan: An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density shall not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt shall be monitored on periodic basis to ensure that survival rate not be less than 80 %.
22.9	Wildlife conservation plan (In case of presence of schedule I species)
22.10	Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

S. No..	Terms of Reference
22.11	Explore possibilities for recycling and reusing of treated water in the unit to reduce the freshwater demand and waste disposal.
22.12	An Action Plan for improving the house-keeping activities in the raw material handling area need to be submitted
22.13	Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
22.14	Action plan to limit the dust emission from all the stacks below 30 mg/Nm3 shall be furnished.
22.15	Action plan for fugitive emission control in the plant premises shall be provided.

Standard Terms of Reference for conducting Environment Impact Assessment Study for Cement plants and information to be included in EIA/EMP report

1.

Sr. No.	Terms of Reference
1.1	Limestone and coal linkage documents along with the status of environment clearance of limestone and coal mines.
1.2	Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
1.3	Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
1.4	If the raw materials used have trace elements, an environment management plan shall also be included.
1.5	Plan for the implementation of the recommendations made for the cement plants in the Corporate Responsibility for Environmental Protection (CREP) guidelines shall be prepared.
1.6	Energy consumption per ton of clinker and cement grinding
1.7	Provision of waste heat recovery boiler
1.8	Arrangement for co-processing of hazardous waste in cement plant.
1.9	Provision of Alternate fuels.

Sr. No.	Terms of Reference
1.10	Details of Implementation of Fly Ash Management Rules
1.11	Emission/Effluent norms as per GSR 496 (E) dated 9/5/2016 [EPA Rules 1986].
1.12	Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm3 shall be furnished.
1.13	PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.
1.14	Action plan for 100 % solid waste utilization shall be submitted.
1.15	PM (PM10 and P2.5) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM10 to be carried over.

Additional Terms of Reference

1) Latest drone videography/survey covering the project area/nearby area with time, date & GPS coordinate.
2) NOC/Permission from Irrigation Department.
3) Project proponent should conduct social ecological study in the villages within the 05 km radius.
4) Project proponent will conduct biological study in core & buffer area of the project site.
5) Land conversion documents should be provided at the time of EIA presentation.
6) Plantation should be proposed as per Miyawaki method i.e. planting different types of trees at very close intervals which give a good green cover. A total of 33% of the plot area should be designated for green belt which should be raised along the boundaries of the plot with minimum of 03 mt width along the periphery in organized manner.
7) Layout plan which showing the processing unit, storage of raw material alongwith product storage yard etc.
8) Plan for transportation of raw material from source to unit.
9) Wind rose diagram, location of monitoring station and period of monitoring should be provided.

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Cement	Product	2	1	3	Million TPA	Road	-
D.G Set	Product	1250	0	1250	KVA (Kilo Volt Ampere)	Captive Use	D.G. set for emergency backup

ANNEXURE 2

कार्यालय प्रभागीय वनाधिकारी, हमीरपुर वन प्रभाग, हमीरपुर।

पत्रांक 3261 /26–1/दिनांक, हमीरपुर, जून 15 ,2024.

सेवा में,

डा0 सचिन गुप्ता,
यूनिट हेड मे0 जेके सीमेंट लि0/जेके
सीमेंट वर्क्स हमीरपुर।

विषयः–Proposed Expansion in Cement Production capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand-alone Grinding Unit at Village: Ingohta, Pargana-Sumerpur, Tehsil & District:Hamirpur, Uttar Pradesh by M/S. JK Cement Works Hamirpur (A unit of Jk Cement Limited)-Reg.

सन्दर्भः–जे0के0 सीमेंट वर्क्स हमीरपुर का पत्रांक–जेके/एच0जी0यू0/43/दिनांक 14.06.2024.

उपरोक्त विषयक सन्दर्भित पत्र के क्रम में क्षेत्रीय वन अधिकारी सुमेरपुर से स्थलीय जॉच कराई गई। क्षेत्रीय वन अधिकारी सुमेरपुर ने अपने पत्रांक–183/33–1/दिनांक 15.06.2024 द्वारा अपनी जॉच रिपोर्ट इस कार्यालय को प्रेषित की गई है। क्षेत्रीय वन अधिकारी सुमेरपुर की जॉच रिपोर्ट के अुनसार परियोजना स्थल में वनभूमि नही है तथा परियोजना स्थल के 10 किमी0 की परिधि में वन्यजीव विहार, नेशनल पार्क एवं बायोस्फेयर रिजर्व नही है। साथ ही परियोजना स्थल के आस–पास पाये जाने वाले वनस्पतियों एवं वन्यजीवों की प्रमाणित सूची उपलब्ध कराई गई है जो मूल में संलग्नकर प्रेषित है।

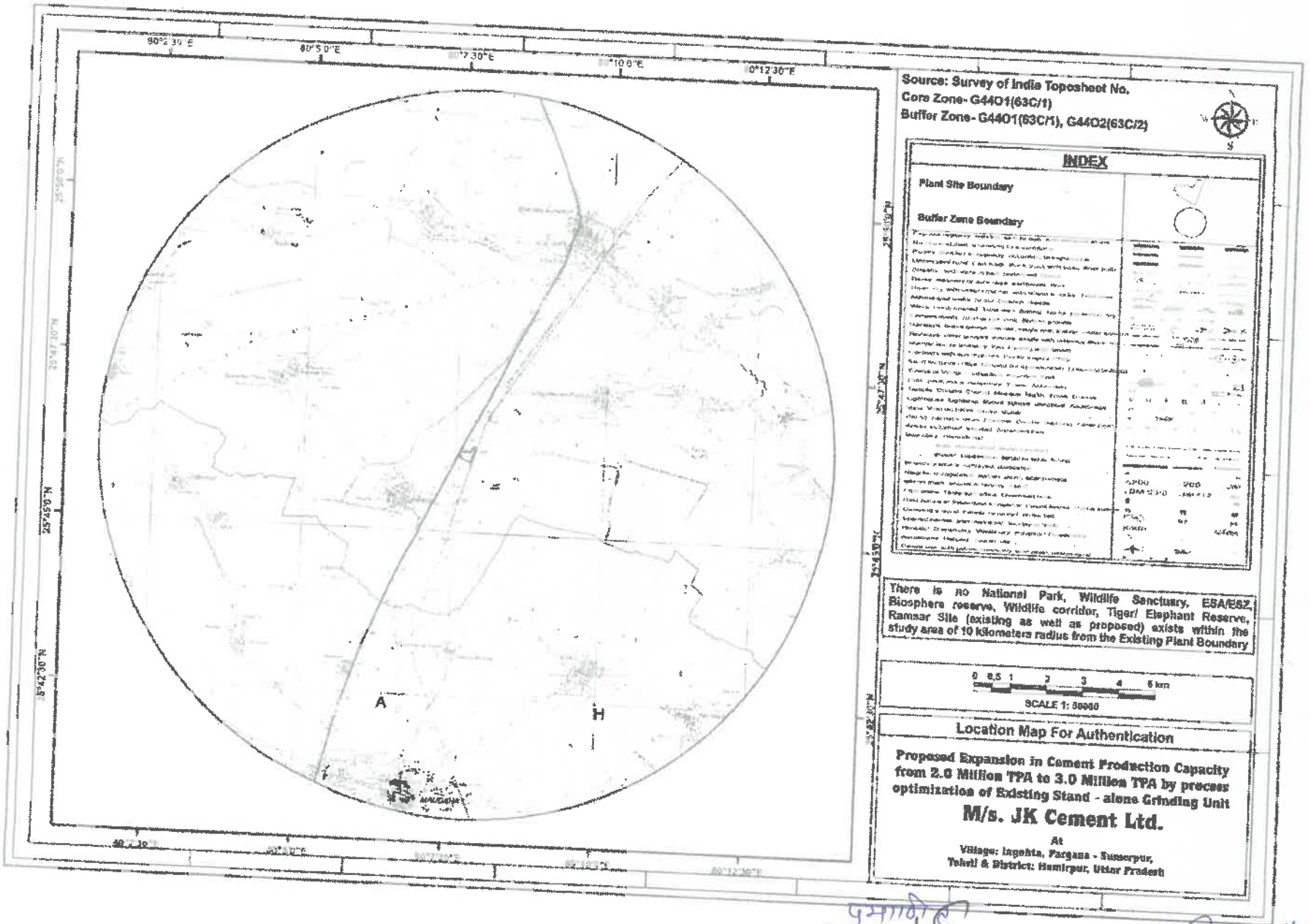
संलग्नकः–उपरोक्तानुसार।

(ए0के0 श्रीवास्तव)
प्रभागीय वनाधिकारी
हमीरपुर वन प्रभाग, हमीरपुर

पृष्ठांकन संख्या...../अ/समदिनांक

प्रतिलिपि–क्षेत्रीय वन अधिकारी सुमेरपुर को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

(ए0के0 श्रीवास्तव)
प्रभागीय वनाधिकारी
हमीरपुर वन प्रभाग, हमीरपुर



प्रभागीय वन अधिकारी
हमीरपुर वन प्रभाग

क्षेत्रीय वनाधिकारी

Table No. - 1

Inventory of Floral Diversity in Core & Buffer Zone in 10 km radius of Exisiting Plant Site

Based on Field survey, inputs from locals and perused from Secondary Data

S. No.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation status
			Trees			
1.	*Acacia nilotica*	Babool	Fabaceae	+	+	LC
2.	*Acacia catechu*	Khair	Fabaceae	-	+	LC
3.	*Azadirachta indica*	Neem	Meliaceae	+	+	LC
4.	*Aegle marmelos*	Bel	Rutaceae	-	+	NT
5.	*Caryota mitis*	Fish tail palm	Arecaceae	-	+	LC
6.	*Cassia siamea*	Kassod	Fabaceae	+	+	LC
7.	*Cassia fistula*	Amaltash	Fabaceae	-	+	LC
8.	*Dalbergia sissoo*	Shesham	Fabaceae	-	+	LC
9.	*Ficus religiosa*	Pipal	Moraceae	+	+	LC
10.	*Ficus glomerata*	Gular	Moraceae	-	+	LC
11.	*Ficus virens*	pakod	Moraceae	-	+	LC
12.	*Grevillea robusta*	Silver-oak	Protaceae	-	+	LC
13.	*Leucaena leucocephala*	Subabul	Fabaceae	-	+	DD
14.	*Mangifera indica*	Aam	Anacardiaceae	-	+	DD
15.	*Mitragyna parviflora*	Kadam	Rubiaceae	-	+	NA
16.	*Mallotus philippensis*	Rohini	Euphorbiaceae	-	+	LC
17.	*Murraya koenigii*	Curry Patta	Rutaceae	-	+	LC
18.	*Pinus roxburghi*	Chir	Pinaceae	-	+	LC
19.	*Polyalthia longifolia*	Ashok	Annonaceae	+	+	NA
20.	*Delonix regia*	Gulmohar	Fabaceae	-	+	LC
21.	*Eucalyptus globulus*	Safeda	Myrtaceae	-	+	LC
22.	*Emblica officinalis*	Amla	Phyllanthaceae	-	+	NA
23.	*Phoenix sylvestris*	Khajoor	Arecaceae	-	+	NA
24.	*Prosopis juliflora*	Vilayati babool	Mimosaceae	+	+	LC
25.	*Toona sinensis*	Toon	Meliaceae	-	+	LC
26.	*Tectona grandis*	Sagwan	Lamiaceae	-	+	EN
27.	*Terminalia arjuna*	Arjun	Combretaceae	-	+	NA
28.	*Terminalia belerica*	Bahera	Combretaceae	-	+	LC
29.	*Terminalia chebula*	Harer	Combretaceae	-	+	LC
30.	*Tamaridus indica*	Imli	Fabaceae	-	+	LC
31.	*Pterocarpus marsupium*	Beejasal	Fabaceae	-	+	NT
32.	*Syzygium cumini*	Jamun	Myrtaceae	-	+	LC
33.	*Schleichera oleosa*	Kusum	Sapindaceae	-	+	LC
34.	*Shorea robusta*	Sakhu	Dipterocarpaceae	-	+	LC
35.	*Ziziphus mauritiana*	Ber	Rhamnaceae	-	+	LC
			Shrubs			
36.	*Adhatoda vasica*	Adusa	Acanthaceae	-	+	NA
37.	*Callistemon lanceolatus*	Bottle brush	Myrtaceae	-	+	NA

प्रभागीय वन अधिकारी
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हमीरपुर

क्षेत्रीय वनाधिकारी
सुमेरपुर रेंज

S. No.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation status
38.	Carissa carandas	Karonda	Apocynaceae	-	+	NA
39.	Ipomoea carnea	Behaya	Convolvulaceae	-	+	NA
40.	Nerium oleander	Kaner	Apocynaceae	-	+	LC
41.	Ricinus communis	Arandi	Euphorbiaceae	-	+	NA
42.	Calotropis procera	Aak	Asclepiadaceae	-	+	LC
43.	Carica papaya	Papaya	Caricaceae	-	+	DD
44.	Ziziphus nummularia	Jharberi	Rhamnaceae	-	+	NA
45.	Jasminum polyanthum	Chamali	Oleaceae	-	+	NA
46.	Plumeria alba	Champa	Apocynaceae	-	+	LC
47.	Psidium guajava	Amrud	Myrtaceae	-	+	LC
48.	Citrus limon	lemon	Rutaceae	-	+	LC
49.	Tagetes minuta	Marigold	Asteraceae	-	+	NA
50.	Tecoma gaudichaudi	Yellow Bell	Bignoniaceae	-	+	NA
51.	Tephrosia villosa	Sarapunkha	Fabaceae	-	+	LC
		Herbs and Climbers				
52.	Aerva tomentosa	Bui	Amaranthaceae	-	+	NA
53.	Agave angustifolia	Caribben Agave	Asparagaceae	-	+	NA
54.	Amaranthus spin osus	Jangli chaulai	Amaranthaceae	-	+	NA
55.	Achyranthes aspera	Latjira	Amaranthaceae	+	+	NA
56.	Acalypha indica	Muktajhuri	Euphorbiaceae	+	+	NA
57.	Adhatoda vasica	Vasaka	Acanthaceae	-	+	LC
58.	Boerhavia diffusa	Punarnava	Nyctaginaceae	-	+	NA
59.	Bacopa monnieri	Brahmi	Plantaginaceae	-	+	LC
60.	Cannabis sativa	Bhung	Cannabaceae	-	+	NA
61.	Celosia argentea	Survali	Amaranthaceae	-	+	LC
62.	Cleome gynandra	Safed hulhul	Cleomaceae	-	+	NA
63.	Commelina forskaolli	Kankus	Commelinaceae	-	+	NA
64.	Ocimum gratissimum	Ban Tulsi	Lamiaceae	+	+	NA
65.	Cucumis melo ssp. agrestis	Kachari	Cucurbitaceae	+	+	NA
66.	Datura metel	Dhatura	Solanaceae	-	+	NA
67.	Digera muricata	Latmahuria	Amaranthaceae	-	+	NA
68.	Echinops echinatus	Unthkanta	Asteraceae	-	+	NA
69.	Polycarpaea corymbosa	Oldman'S Cap	Caryophyllaceae	-	+	NA
70.	Sida rhombifolia	Khareti	Malvaceae	+	+	NA
71.	Sesamum indicum	Til	Pedaliceae	+	+	NA
72.	Thevetia peruviana	Peeli Kaner	Apocynaceae	-	+	VU
73.	Euphorbia hirta	Badi Dudhi	Euphorbiaceae	-	+	NA
74.	Helianthus annuus	Sunflower	Asteraceae	-	+	LC
75.	Indigofera cordifolia	Gokhru	Fabaceae	-	+	NA
76.	Lantana camara	Raimuniya	Verbenaceae	+	+	NA
77.	Mollugo pentaphylla	Jharasi	Molluginaceae	-	+	NA
78.	Eclipta alba	Bhringraj	Asteraceae	-	+	LC

प्रमाणित

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List of flora and Fauna

S. No.	Scientific Name	Local Name	Family	Core	Buffer	IUCN conservation status
79.	Euphorbia lobatum	-		-		NA
80.	Indigofera astragalin	Dagadia, phulzadi	Fabaceae	+	+	NA
81.	Indigofera cordifolia	Gokhru	Fabaceae	-	+	NA
82.	Leucas aspera	Kubi	Lamiaceae	-	+	NA
83.	Pupalia lappacea	Nagadaminee	Amaranthaceae	-	+	LC
84.	Tephrosia strigosa	-	Fabaceae	+	+	NA
85.	Sesamum indicum	Tal	Pedaliaceae	+	+	NA
86.	Commelina undulata	Jalapippalingu li	Commelinaceae	-	+	NA
87.	Hibiscus lobatus	Lobed Leaf Mallow	Malvaceae	-	+	NA
88.	Physalis minima	Rasbhari	Solanaceae	+	+	VU
89.	Triumfetta rhomboidea	Chiki Habit	Tiliceae	+	+	NA
		Grasses				
90.	Aristida funiculata	-	Poaceae	+	+	NA
91.	Aristida adscensionis	Bristle grass	Poaceae	-	+	NA
92.	Brachiaria ramosa	-	Poaceae	+	+	LC
93.	Cynodon dactylon	Doob ghas	Poaceae	+	+	NA
94.	Dichanthium annulatum	Sheda Grass	Poaceae	+	+	NA
95.	Sorghum halepense	Jangli-jowar	Poaceae	+	+	NA
96.	Saccharum spontaneum	Knas	Poaceae	+	+	LC
97.	Saccharum Bengalens	Munj	Poaceae	-	+	NA

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
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Table No. - 2

Inventory of Aquatic Floral Diversity in 10 km radius of Exisiting Plant Site

Based on Field survey, inputs from locals and perused from Secondary Data

S. No	Scientific Name	Local name	Family	Habit	IUCN conservation status
1.	*Lemna perpusila*	Small Duckweed	Lemnaceae	Free-floating, aquatic plant found on the surface of still or slow-moving freshwater.	NA
2.	*Spirodela polyrrhiza*	Giant Duckweed	Araceae	Free-floating, aquatic plant, forming dense mats on the surface of water bodies.	LC
3.	*Wolffia columiana*	Water meal	Arales	Free-floating, smallest flowering plant, found on the surface of still freshwater.	NA
4.	*Nymphaea alba*	White water lily	Nymphaeales	Floating-leaved, rooted aquatic plant, with large leaves and flowers floating on the water surface.	LC
5.	*Potamogeton diversifolius*	American pond weed	Potamogetonacea	Submerged aquatic plant with thread-like leaves, typically found in freshwater habitats.	NA
6.	*Ceratophyllum Demersum*	Water head, pond weed	Ceratophyllales	Submerged, free-floating aquatic plant, often found in still or slow-moving water.	LC
7.	*Typha elephantina*	Era	Typhaceae	Emergent aquatic plant, often found in wetlands and marshes.	LC
8.	*Hydrilla verticillata*	Hydrilla	Hydrocharitales	Submerged aquatic plant, forming dense underwater mats.	NA
9.	*Vallisneria spiralis*	T ape grass	Hydrocharitaceae	Submerged, rosette-forming aquatic plant, commonly found in freshwater habitats.	LC
10.	*Cyperusrotundus*	Nutgrass, Coco	Cyperaceae	Perennial sedge, often found in wet or dry soil, considered a weed.	NA
11.	*Bacopa monnieri*	Brahmi	Plantaginaceae	Prostrate or creeping aquatic herb, often found in wetlands or along water bodies.	LC
12.	*Arundo donex*	Arundo	Poaceae	Tall, perennial grass, typically found in wetlands or along watercourses.	NA
13.	*Chenopodium album*	Bathua	Amaranthaceae	Annual herb, often found in disturbed soils, considered a weed.	NA
14.	*Polygonum species*	knotweed	Polygonaceae	Various habits including terrestrial and aquatic, often found in moist or wet habitats.	CR
15.	*Eichhornia crassipes*	Water hyacinth	Pontederiaceae	Free-floating aquatic plant, often forming dense mats on the surface of water bodies.	NA
16.	*Utricularia*	-	Lantbulariaceae	Free-floating or rooted aquatic carnivorous plants, often found in nutrient-poor waters.	LC
17.	*Potamogeton crispus*	Curly-leaf Pond weed	Potamogetonaceae	Submerged aquatic plant, commonly found in freshwater habitats.	LC
18.	*Colocasia Spp.*	Elephant Ear	Araceae	Large, broad-leaved aquatic or semi-aquatic plants, often found in wetlands.	NA
19.	*Canna lily*	Indian Shot	Cannaceae	Herbaceous perennial, often found in wetlands or moist soils.	NA

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Table No. - 3

Inventory of Faunal Diversity In Core & Buffer Zone of Exisiting Plant Site

Based on Field survey, inputs from locals and perused from Secondary Data

S. No.	Scientific Name	Common Name	Status as per W(P)AA, 2022	Core Zone	Buffer Zone	IUCN conservation status
Mammals						
1.	*Felis chaus*	Jungle cat	Sch.I	-	+	LC
2.	*Herpestes edwardsii*	Common Mongoose	Sch. I	-	+	LC
3.	*Funambulus pennanti*	Five Striped Palm Squirrel	Sch. IV	-	+	LC
4.	*Rattus rattus*	House Rat	Sch. IV	-	+	LC
5.	*Mus booduga*	Little Indian field mouse	Sch. IV	-	+	LC
6.	*Semnopithecus entellus*	Common Langur	Sch. II	-	+	NA
7.	*Sus scrofa*	Wild Boar	Sch. II	-	+	LC
8.	*Lepus nigricollis*	Indian hare	Sch. II	-	+	LC
9.	*Canis aureus*	Jackal	Sch I	-	+	LC
10.	*Axis axis*	Chital	Sch.II	-	+	LC
Reptiles						
11.	*Ptyas mucosus*	Rat Snake	Sch I	-	+	NA
12.	*Mabuya carinata*	Brahminy Skink	Sch. IV	-	+	NA
13.	*Hemidactylus flaviviridis*	House Gecko/ Chhipkali	Sch. IV	-	+	NA
14.	*Naja naja*	Cobra	Sch I	-	+	LC
Amphibians						
15.	*Rana hexadactyla*	Indian Pond Frog	Sch.IV	-	+	LC
16.	*Rana limnocharis*	Indian cricket Frog	Sch.IV	-	+	LC
Butterflies						
17.	*Danaus chrysippus*	Plain Tiger	Sch IV	-	+	LC
18.	*Ixias Marianne*	White -orange Tip	Sch IV	-	+	NA
19.	*Precis orithya*	Blue Pancy	Sch. IV	-	+	NA
20.	*Papilio demoleus*	Common Lime	Sch. IV	-	+	NA
21.	*Junonia lemonias*	Lemon pansy	Sch. IV	-	+	NA
22.	*Belenois aurota*	Pioneer	Sch. IV	-	+	LC
23.	*Papilio polytes*	Common Mormon	Sch. IV	-	+	NA
24.	*Apis cerana indica*	Choti Madhumakkhi	Sch. IV	-	+	NA
25.	*Apis dorsata*	Badi Madhumakkhi	Sch. IV	-	+	NA
26.	*Buthus sp.*	Scorpion	Sch. IV	-	+	NA
27.	*Stegodyphus sp.*	Social Spider	Sch. IV	-	+	NA
28.	*Sympertrum fonscolombii*	Red - veined darter (Dragonfly)	Sch. IV	-	+	LC

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report

Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered

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W(P)AA, 2022: Wildlife (Protection) Amdenment Act, 2022

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Table No. - 4

Inventory of Avifaunal (Bird) Diversity in Core & Buffer Zone of Exisiting Plant Site

Based on Field survey, inputs from locals and perused from Secondary Data

S. No.	Scientific Name	Common Name	Status As Per W(P)A, 2022	Core	Buffer Zone	IUCN conservation status
1.	*Acridotheres tristis*	Common Myna	Sch. II	-	+	LC
2.	*Actitis hypoleucos*	Common Sandpiper	Sch. II	-	+	LC
3.	*Bubulcus ibis*	Cattle egret	Sch. II	-	+	LC
4.	*Charadrius dubius*	Little ringed plover	Sch. IV	-	+	LC
5.	*Columba livia*	Rock Pigeon	Sch. IV	+	+	LC
6.	*Copsychus saularis*	Oriental magpie robin	Sch. II	-	+	LC
7.	*Corvus macrorhynchos*	Jungle Crow	Sch. II	+	+	LC
8.	*Cuculus micropterus*	Indian Cuckoo	Sch. II	-	+	LC
9.	*Eudynamys scolopacea*	Asian Koel	Sch. II	-	+	LC
10.	*Francolinus pondicerianus*	Grey francolin	Sch. II	-	+	LC
11.	*Galerida cristata*	Common crested lark	Sch. II	-	+	LC
12.	*Gallinula chloropus*	Common moorhen	Sch. II	-	+	LC
13.	*Gracupica contra*	Pied myna	Sch. II	-	+	LC
14.	*Halcyon smyrnensis*	White throated Kingfisher	Sch. II	-	+	LC
15.	*Himantopus himantopus*	Black Winged Stilt	Sch. II	-	+	LC
16.	*Hirundo rustica*	Barn Swallow	Sch. II	-	+	LC
17.	*Lanius cristatus*	Brown Shrike	Sch. II	-	+	LC
18.	*Lonchura punctulata*	Scaly breasted munia	Sch. II	-	+	LC
19.	*Microcarbo niger*	Little cormorant	Sch. II	+	+	LC
20.	*Apus nipalensis*	Common swift	Sch. II	+	+	LC
21.	*Pseudibis papillosa*	Black ibis	Sch. II	+	+	LC
22.	*Ardea cinerea*	Grey Heron	Sch. II	+	+	LC
23.	*Ocyceros birostris*	Indian grey hornbill	Sch. II	+	+	LC
24.	***Pavo cristatus***	**Indian Peafowl**	**Sch. I**	-	+	LC
25.	*Ploceus philippinus*	Baya weaver	Sch. II	+	+	LC
26.	*Francolinus pondicerianus*	Grey francolin	Sch. II	+	+	LC
27.	*Coracias benghalensis*	Indian Roller	Sch. II	+	+	LC
28.	*Halcyon smyrnensis*	White -throated kingfisher	Sch. IV	+	+	LC
29.	*Ceryle rudis*	Pied kingfisher	Sch. II	+	+	LC

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S. No.	Scientific Name	Common Name	Status As Per W(P)A, 2022	Core	Buffer Zone	IUCN conservation status
30.	*Merops orientalis*	Green bee-eater	Sch. II	+	+	LC
31.	*Psittacula krameri*	Rose-ringed parakeet	Sch. II	+	+	LC

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
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W(P)AA, 2022: Wildlife (Protection) Amendment Act, 2022

Table No. - 5

Inventory of Ichthyofaunal Diversity in Buffer Zone of Exisiting Plant Site

Based on Field survey, inputs from locals and perused from Secondary Data

S. No.	Scientific Name	Common Name	Core Zone	Buffer Zone	IUCN conservation status
1.	*Catla catla*	Catla	-	+	LC
2.	*Chela bacaila*	Chela	-	+	NA
3.	*Cirrhinus mrigala*	Mrigal	-	+	LC
4.	*Clarias magur*	Catfish	-	+	EN
5.	*Gambusia affinis*	Mosqitofish	-	+	LC
6.	*Labeo bata*	-	-	+	LC
7.	*Labeo rohita*	Rohu	-	+	LC
8.	*Puntius ticto*	Ticto barb/ Pothia	-	+	LC
9.	*Silondia gangetica*	Silond	-	+	NA

Source: Forest Working Plan, Field Survey, District Forest Survey Reports and earlier EIA/EMP Report
Abbreviations: LC: Least Concern, NA: Not assessed, DD: Data Deficient, VU: Vulnerable, NT: Near Threatened, EN: Endangered
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Source: Survey of India Toposheet No.
Core Zone- G44O1(63C/1)
Buffer Zone- G44O1(63C/1), G44O2(63C/2)

N
W E
S

80°2'30"E 80°5'0"E 80°7'30"E 80°10'0"E 80°12'30"E

25°50'0"N
25°47'30"N
25°45'0"N
25°42'30"N

NH-34
Adjacent in West

Nallah
~0.5 km in NW

Karoran Nala
~5.5 km in North

Bharuwa Sumerpur RS
~7.5 km in NNE

Ingohta RS
~1.0 km in South

Ragaul RS
~9.0 km in South

Chandrawal River
~9.5 km in SE

Jhangra Nala
~8.5 km in SE

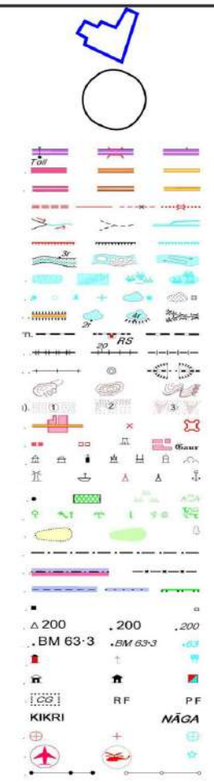
Bharuwa Sumerpur RS
Karoran Nala
NH-34
Nallah
Plant Site
Ingohta RS
Ragaul RS
Chandrawal River
Jhagra Nala

INDEX

Plant Site Boundary

Buffer Zone Boundary

Express highway: with toll; with bridge; with distance stone
Roads, metalled: according to importance
Roads, double carriageway: according to importance
Unmetalled road. Cart-track. Pack-track with pass. Foot-path
Streams: with track in bed; undefined. Canal
Dams: masonry or rock-filled; earthwork. Weir.
River: dry with water channel; with island & rocks. Tidal river.
Submerged rocks. Shoal. Swamp. Reeds.
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry.
Embankments: road or rail; tank. Broken ground.
Railways, broad gauge: double; single with station; under constr
Railways, other gauges: double; single with distance stone; do.
Mineral line or tramway. Kiln. Cutting with tunnel.
Contours with sub-features. Rocky slopes. Cliffs.
Sand features:(1)flat (2)sand-hills (permanent). 3)dunes(shifting)
Towns or Villages: inhabited; deserted. Fort.
Huts: permanent; temporary. Tower. Antiquities.
Temple. Chhatri. Church. Mosque. Idgāh. Tomb. Graves.
Lighthouse. Lightship. Buoys: lighted; unlighted. Anchorage.
Mine. Vine on trellis. Grass. Scrub.
Palms: palmyra; other. Plantain. Conifer. Bamboo. Other trees.
Areas: cultivated; wooded. Surveyed tree.
Boundary, international.
,, state: demarcated; undemarcated.
,, district; subdivision; tahsīl or tāluk; forest.
Boundary pillars: surveyed; unlocated.
Heights, triangulated: station; point; approximate.
Bench-mark: geodetic; tertiary; canal.
Post office. Telegraph office. Overhead tank.
Rest house or Inspection bungalow. Circuit house.Police station.
Camping ground. Forest: reserved; protected.
Spaced names: administrative; locality or tribal.
Hospital. Dispensary. Veterinary: Hospital / Dispensary
Aerodrome. Helipad. Tourist site.
Power line: with pylons surveyed; with poles unsurveyed.



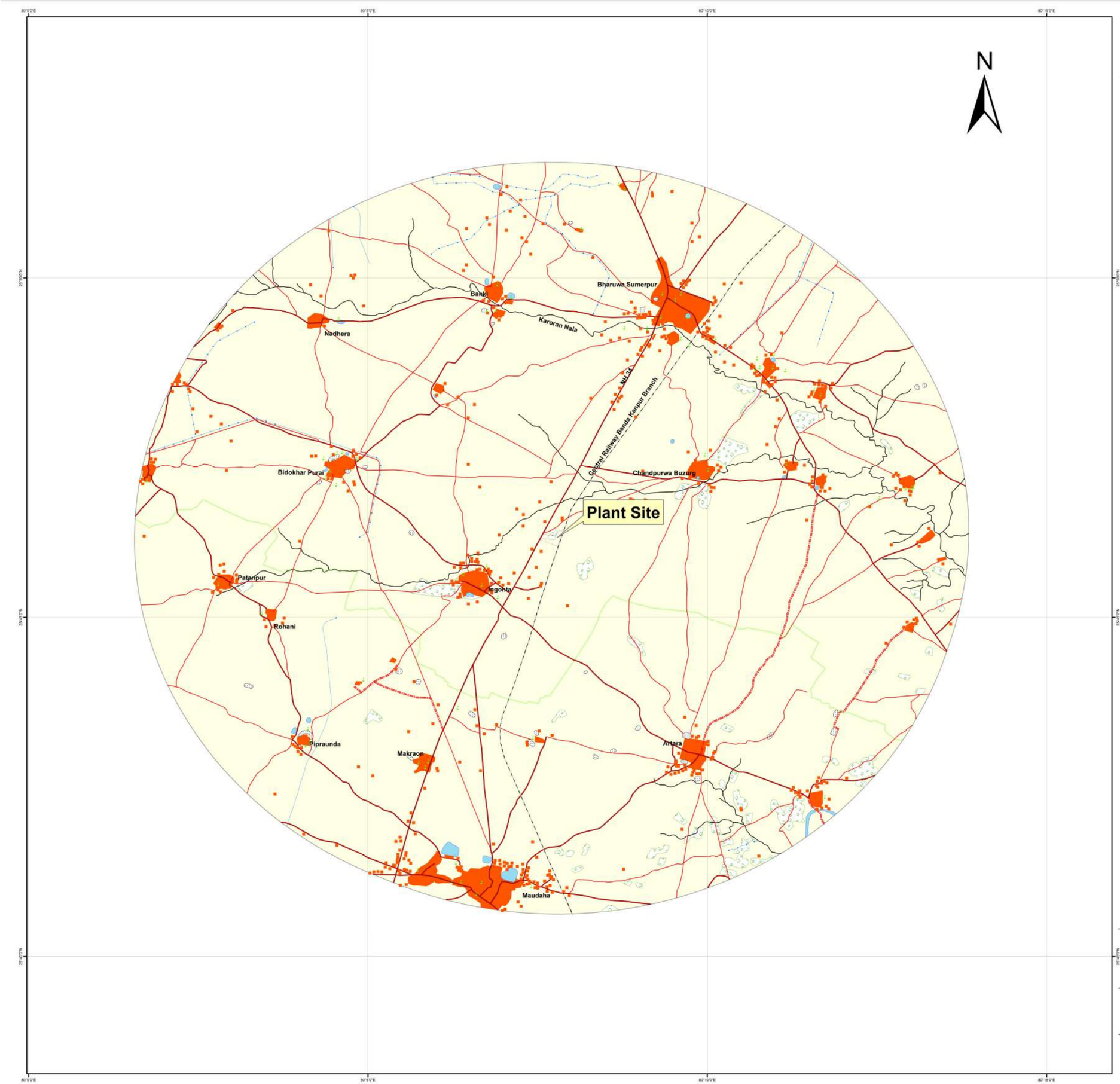
0 0.5 1 2 3 4 5 km

Environment Setting Map

Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit

M/s. JK Cement Ltd.

At
Village: Ingohta, Pargana - Sumerpur,
Tehsil & District: Hamirpur, Uttar Pradesh



DIGITAL TOPOSHEET

Legend

- Plantsite
- Hamirpur - Maudaha Tehsil Boundary
- Temples
- Point Settlmnts
- Railway Line

Roads

- Metalled Roads
- Unmetalled Roads
- Crat Track

Water Bodies

- Canal
- Streams
- Dry Lake/Pond
- Lake/Pond

- Settlements
- Open Scrub
- buffer10km

Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of existing Stand - Alone Grinding Unit

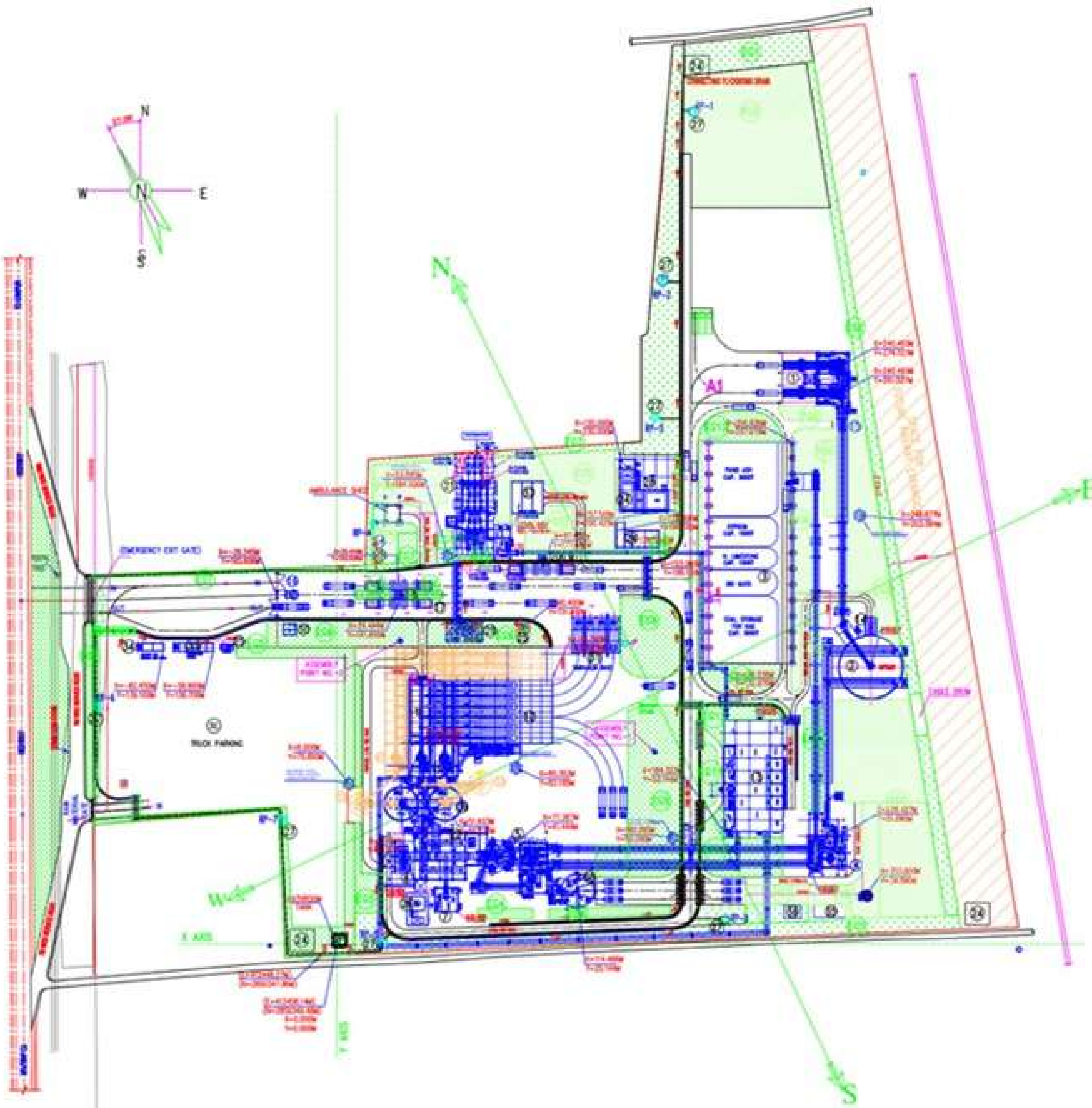
M/S JK Cement Ltd.

At
Village: Ingohta, Pargana - Sumerpur
Tehsil & District: Hamirpur, Uttar Pradesh

Representative Fraction
1:50,000

Kilometers
0 1 2 4 6 8

Source : Survey Of India



LEGEND EXISTING

S.NO.	GENERAL PLANT DESCRIPTION	[illegible]	REMARKS
1.	BOX FEEDER FOR CLINKER	120.800M	
2.	CLINKER SILO	120.800M	
3.	ADDITIVE STORAGE SHED	120.800M	
4.	CEMENT MILL HOPPERS	120.800M	
5.	CEMENT MILL BUILDING	120.800M	
6.	CEMENT MILL BAGHOUSE	120.800M	
7.	HAG BUILDING	120.800M	
8.	FLYASH SILO	120.800M	
9.	CEMENT SILOS	120.800M	
10.	PACKING PLANT & STORE	120.800M	
11.	EMPTY BAGS GODOWN	120.800M	
12.	TRUCK LOADING PLATFORM	120.800M	
13.	CCR + LOAD CENTER + LAB + ADMIN BLDG.	120.800M	
14.	CLINKER SILO DOZER ENTRY	120.800M	
15.	EMERGENCY DUMP HOPPER	120.800M	
16.	GATE HOUSE (EMERGENCY EXIT GATE)	120.800M	
17.	ROAD WEIGH BRIDGE	120.800M	
18.	WEIGH BRIDGE CABIN	120.800M	
19.	WEIGH BRIDGE MATERIAL HANDING	120.800M	
20.	WEIGH BRIDGE MATERIAL HANDING CABIN	120.800M	
21.	SEB RECEIVING SUB STATION & METERING ROOM	120.800M	
22.	COMP. ROOM BELOW CM BAG HOUSE	120.800M	
23.	AIR QUALITY MONITORING	120.800M	
24.	OIL STORAGE, TOOL ROOM & REST ROOM	120.800M	
25.	SANITARY BLOCK	120.800M	
26.	OIL STORAGE TANK	120.800M	
27.	GROUND WATER RECHARGING POINT	120.800M	
28.	WATER TANK AND PUMP ROOM	120.800M	
29.	LOGISTIC OFFICE /PROJECT OFFICE	120.800M	
30.	OUTGOING DI OFFICE	120.800M	
31.	TARPAULIN SHED PACKING PLANT	120.800M	
32.	TRUCK PARKING	120.800M	
33.	TRANSPORTER OFFICE	120.800M	
34.	DRIVERS CANTEEN AND REST ROOM	120.800M	
35.	SPACE FOR DG	120.800M	
36.	STP		
37.	STORE SHED 15x10X5.5Mtr. height		

PROPOSED

LEGEND

S.NO.	GENERAL PLANT DESCRIPTION		REMARKS
[illegible]	[illegible]	[illegible]	
[illegible]	PACKING PLANT	[illegible]	
[illegible]	TRUCK LOADING [illegible]	[illegible]	

LEGEND

S.NO.	DESCRIPTION	SYMBOL
1	PLANT BOUNDARY	
2	EXISTING	
3	PROPOSED	
4	ROAD AND CEMENTED AREA	
5	GROUND WATER RECHARGING POINT	
6	EXISTING GREEN BELT / PLANTATION	
7	PROPOSED GREEN BELT / PLANTATION	

REFER REF. HOLTEC DRAWING NO.- A1-20185-00-02-01(REV-5A)

ALL DIMENSIONS ARE IN M.M. UNLESS OTHERWISE SPECIFIED

ALL UNSPECIFIED WELDS - 6mm

MATERIAL SPECIFICATIONS & TOLERANCES GIVEN ON____ BY MR.____ DESIGNATION -

SURFACE FINISH SYMBOLS

REVISIONS

JK CEMENT WORKS LIMITED

HAMIRPUR (U.P.)

	NAME	DATE
PRD.BY		
DRN. BY	R.K. YADAV	03/04/24
CHD.BY	J.K. JAIN	03/04/24
APPD.BY	SACHIN G.	03/04/24

TITLE: **PLANT LAYOUT**

SCALE: 1/1000

SHEET: A1

DRAWING No.: JKCL-HGU-GEN-08

Sheet - 1 Of - 1

REV 08

UP DATED -27/05/2024

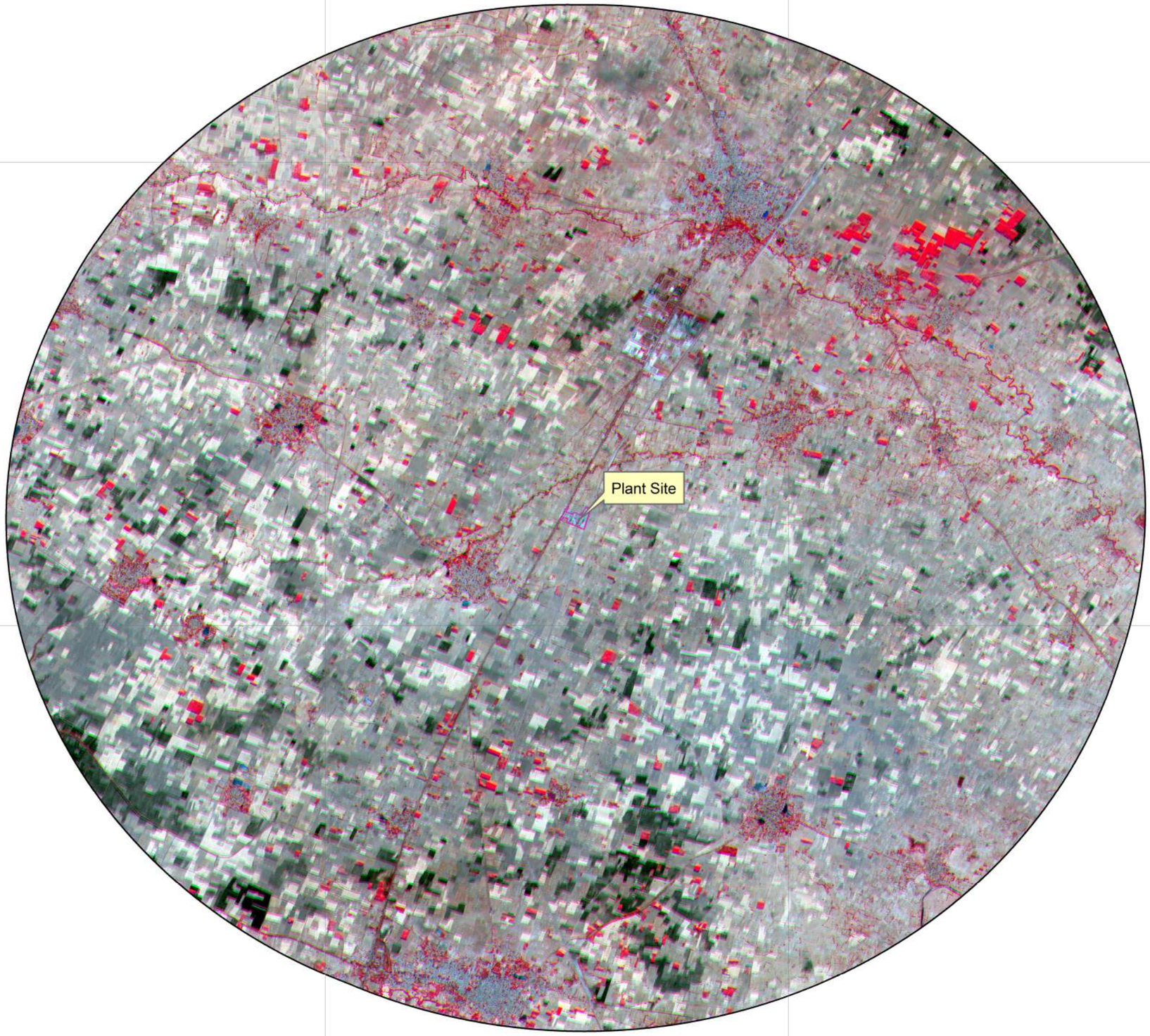
80°5'0"E

80°10'0"E

25°50'0"N

25°45'0"N

25°40'0"N



MULTI SPECTRAL SATELLITE IMAGE OF 10 KM RADIUS STUDY AREA

N
W E
S

Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of existing Stand- Alone Grinding Unit

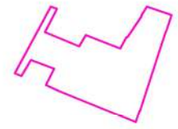
M/S JK Cement Ltd.

At
Village: Ingohta, Pargana - Sumerpur
Tehsil & District: Hamirpur, Uttar Pradesh

Vintage Date : 16 MAY 2024

Source- NRSC, IRS- Resourcesat 2A, Sensor- Liss 4

Plant Site:



Scale:

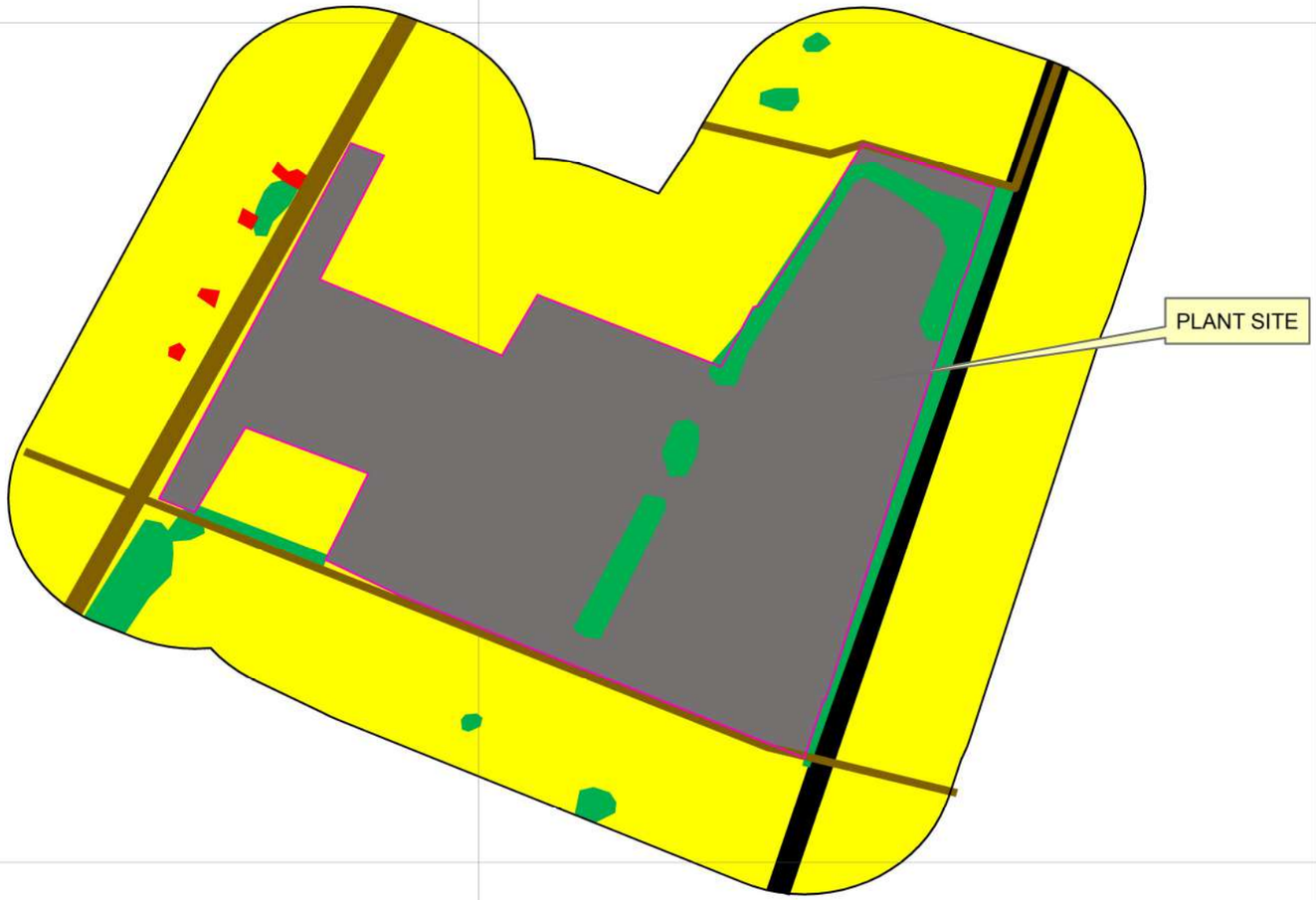
0 1 2 4 6 Km

80°7'40"E

80°8'0"E

25°46'20"N

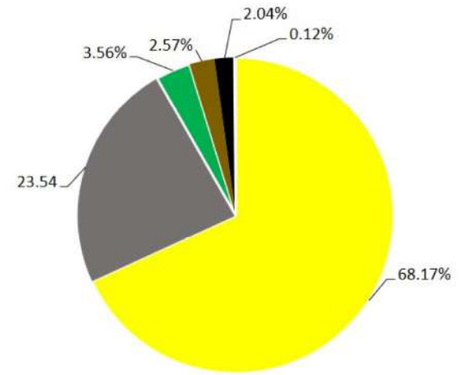
25°46'0"N



LAND USE & LAND COVER MAP OF 100 METER AREA

N
W
E
S

Area Statistics in %



Colour	Class Name	Area (Ha)	Area %
	Agriculture Land	33.92	68.17
	Industries	11.72	23.54
	Vegetation/Plantation	1.77	3.56
	Road	1.27	2.57
	Railway Line	1.02	2.04
	Settlement	0.06	0.12
	Total	**49.76**	**100**

Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of existing Stand - Alone Grinding Unit

M/S JK Cement Ltd.

At
Village: Ingohta, Pargana - Sumerpur
Tehsil & District: Hamirpur, Uttar Pradesh

Plant Site

Scale:

0 0.05 0.1 0.2 0.3 Km

80°5'0"E

80°10'0"E

25°50'0"N

25°45'0"N

25°40'0"N

Central Railway Banda Kanpur Branch

NH 34

Plant Site

Ingohta

Maudaha

Jhagra Nala

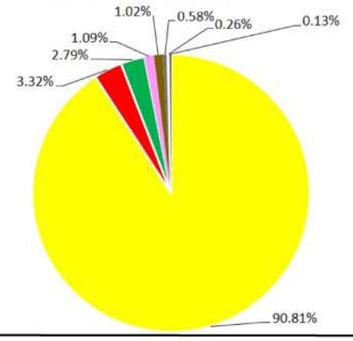
LAND USE & LAND COVER MAP OF 10 KM RADIUS STUDY AREA

N

W E

S

Area Statistics in %



Colour	Class Name	Area (Ha)	Area %
	Agriculture Land	30014.93	90.81
	Settlement	1097.66	3.32
	Vegetation/Plantation	922.95	2.79
	Open Scrub/Waste Land	361.78	1.09
	Road	336.54	1.02
	Industry	191.23	0.58
	Surface Water Bodies	85.14	0.26
	Railway Line	42.17	0.13
	Total	**33052.41**	**100.00**

Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of existing Stand - Alone Grinding Unit

M/S JK Cement Ltd.

At
Village: Ingohta, Pargana - Sumerpur
Tehsil & District: Hamirpur, Uttar Pradesh

Vintage Date : 16 MAY 2024

Source- NRSC, IRS- Resourcesat 2A, Sensor- Liss 4

Plant Site

Scale:

0 1.25 2.5 5 7.5 Km

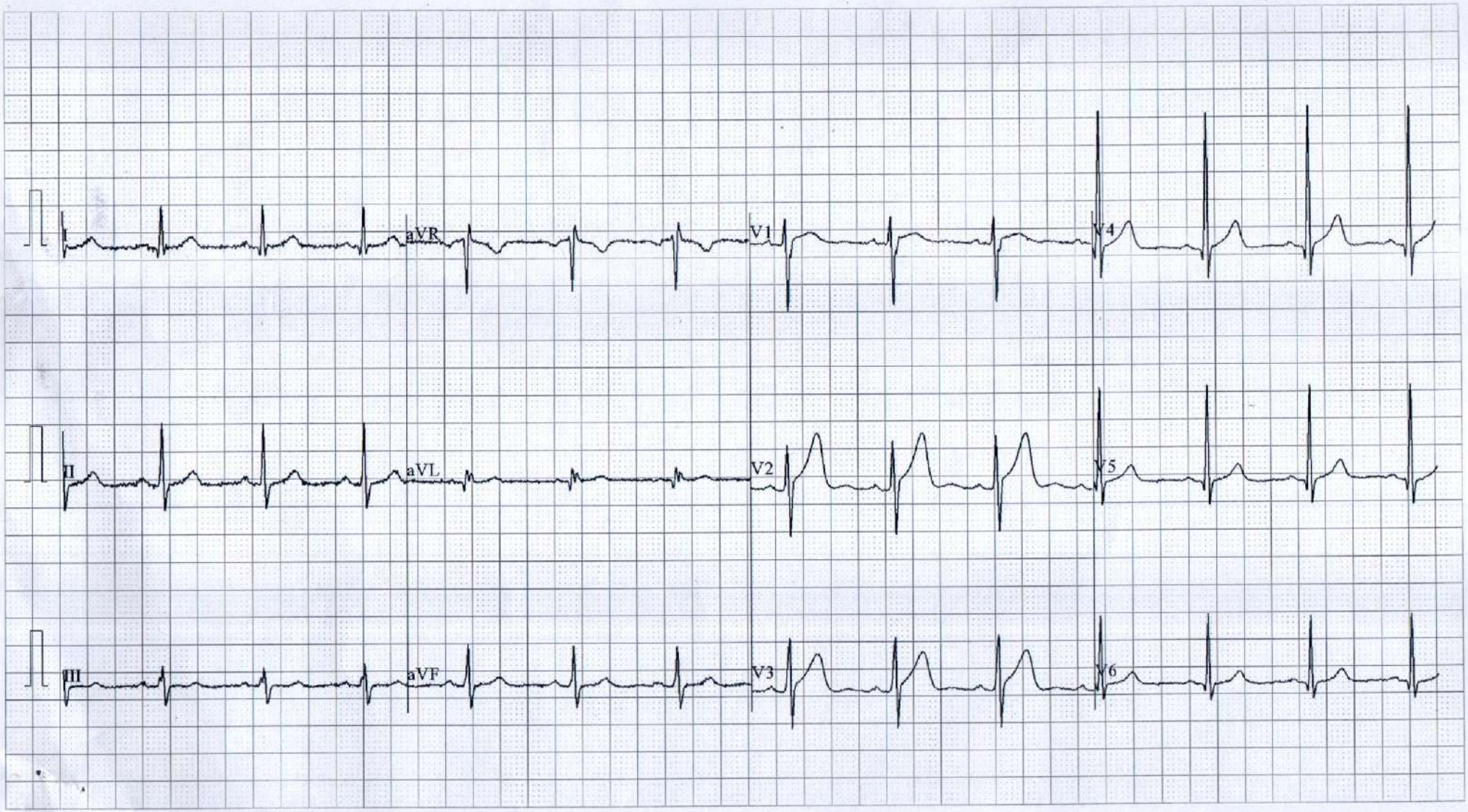
Annexure - 2

ECG REPORT

ID : 258 vimlesh kumar 23Years Male Req. No.:274

HR	: 79 bpm	Diagnosis Information:
P	: 94 ms	Sinus Rhythm
PR	: 147 ms	***Normal ECG***
QRS	: 92 ms	
QT/QTcBz	: 340/392 ms	
P/QRS/T	: 53/32/46 °	
RV5/SV1	: 1.692/1.106 mV	

Report Confirmed by:



0.67~100Hz AC50 25mm/s 10mm/mV 4*2.5s V2.23 SEMIP V1.92

19-03-2025 14:03:55

MAYA HOSPITAL AND RESEARCH INSTITUTE

(Branch:-Janta colony gudhiyari RAIPUR)
Maya Hospital P76 MIDC Butibori Nagpur
CONTACT: +91-9028040290 Email: hr@mayahospital.in web. Site- mayahospital.in

NABH Accredited

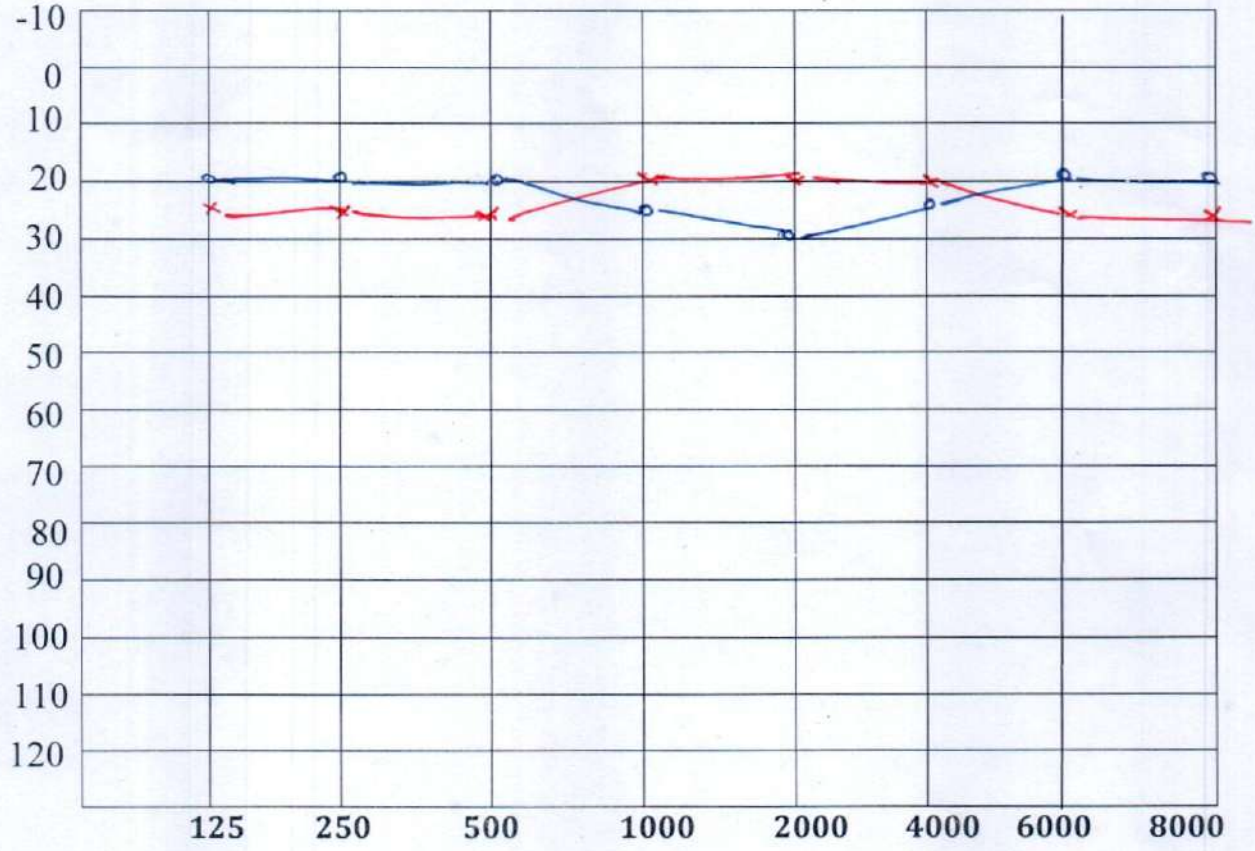
Sr. No. :- 274 Date:- 19/03/2025

NAME :- VIMLESH SHIV KUMAR . AGE/SEX:- 23 Yrs/ Male

Emp. ID. :- 2000800031

NAME OF CONTRACTOR : - Shyam Babu Mishra-Hamirpur

AUDIOLOGICAL EVALUATION



TEST FREQUENCY

Air O	= LEFT EAR : BLUE	LEFT PTA:-
X	= RIGHT EAR : RED	RIGHT PTA:-
Masking		
No Response:	Audiologists Remarks	NORMAL

Dr Shyam Deotale
MBBS, D-Ortho AFIH
2009/07/2941

MAYA HOSPITAL & RESEARCH INSTITUTE

(BRANCH = JANTA COLONY, GUDHIYARI, RAIPUR)
P-76, MIDC, BUTTIBORI (NAGPUR)
CONTACT: +91-9028040290 Email: hr@mayahospital.in web. Site- mayahospital.in

NABH Accredited

S.NO. 274

DEMOGRAPHICS

NAME	AGE&SEX	ADDRESS	DATE OF EXAMINATION
VIMLESH SHIV KUMAR	23/ MALE	J.K. CEMENT WORKS HAMIRPUR	19.03.2025
DEPARTMENT	**DESIGNATION**	**CONTRACTOR NAME**	**EMP CODE**
PRODUCTION	ATTENTANT	SHYAM BABU MISHRA	2000800031

HISTORY/SELF DECLARATION – YES/NO

DIABETES	NO/YES	VERTIGO	NO/YES
HYPERTENSION	NO/YES	TOBACCO CHEWING	NO
EPILEPSY	NO	SKIN DISEASES	NO
ASTHMA/LUNG DISORDER	NO	ALCOHOL INTAKE	NO/YES

GENERAL EXAMINATION

HEIGHT	WEIGHT	BP	BMI	RBS	PULSE	OTHER FINDINGS
155 CM	49 Kg	110/70 mmHg	20.4	94 mg/dl	94 / Min	

SYSTEMIC EXAMINATION

CARDIOVASCULAR SYSTEM :- NAD	RESPIRATORY SYSTEM:- AEEBS
CNS:- NAD	ANY OTHER FINDINGS:- NOT SIGNIFICANT
ECG - NORMAL	AUDIOMETRY - NORMAL
X-RAY- NORMAL	SPIROMETRY- NORMAL

VISION

	RIGHT EYE		LEFT EYE	
	WITH GLASS	WITHOUT GLASS	WITH GLASS	WITHOUTGLASS
DISTANT VISION		6/6		6/6
NEAR VISION		N/6		N/6
COLOUR VISION	NORMAL			

REMARK – VIMLESH SHIV KUMAR IS PHYSICALLY & MENTALLY FIT

Dr. Shyam Deotale
MBBS. D.Ortho AFIH
Reg .No. 2009/07/2941

19/03/2025 81383 VIMLESH KUMAR 23Y M CHEST PA. DR. SHYAM DEOTALE
RAIPUR

MAYA HOSPITAL AND RESEARCH INSTITUTE
(BRANCH- JANTA COLONY GUDHIYARI, RAIPUR)
PLOT NO. P-76 OPPOSITE BANK OF INDIA MIDC BUTIBORI NAGPUR
MOB . NO 9975640290 ,9518523699

NABH Accredited

Test Details

SR. NO :- 274 DATE :- 19.03.2025

PATIENT NAME :-VIMLESH SHIV KUMAR AGE/SEX :- 23/MALE

ADDRESS :- J. K. CEMENT WORKS, HAMIRPUR

Chest X-Ray PA View

OBSERVATION:-

- Both lungs appear normal with no obvious focal or diffuse Parenchymal lesion.
- Both apices &costophrenic angles are clear.
- Tracheal bifurcation appears normal.
- No obvious carinal splaying.
- Both hila are normal.
- Cardiac configuration appears normal.
- Diaphragmatic silhouette also appears normal.
- Bony Thorax does not reveal any obvious abnormality.

IMPRESSION:-

- Chest radiograph does not reveal any significant abnormality.

Dr. MANISH ATEY
MBBS.DMRE.
Reg. No. 2002/08/2937

MAYA HOSPITAL & RESEARCH INSTITUTE

(Branch :- Janta colony Gudhiyari , Raipur)

PLOT NO. P-76, OPPOSITE TO SBI, MIDC, BUTIBORI

Contact: +91-9028040290 Email: hr@mayahospital.in

NABH Accredited

Test Details

Sr No. :- 274
EMP NAME :- VIMLESH SHIV KUMAR

DATE :- 19.03.2025

AGE/SEX:- 23/MALE

ADDRESS :- J. K. CEMENT WORKS, HAMIRPUR

Investigations	Observations	Biological Reference Interval	Unit
LIPID PROFILE TEST			
TOTAL CHOLESTEROL	164	100.00 - 200.00	mg/dL
TRIGLYCERIDES	109	50.00 - 150.00	mg/dl
HDL CHOLESTEROL	44	30.00 - 60.00	mg/dl
LDL CHOLESTEROL	106	80.00 - 130.00	mg/dl
VLDL CHOLESTEROL	21.8	5.00- 40.00	mg/dl
S. CHOLESTEROL/HDL RATIO	3.72	3.05-5.00	
LDL CHOLESTEROL/HDL RATIO	2.4	2.05-3.50	
URINE ROUTINE EXAMINATION			
PHYSICAL EXAMINATION			
COLOUR	PALE YELLOW		
TRANSPARENCY	CLEAR		
CHEMICAL EXAMINATION			
ALBUMINE, URINE SPOT	NIL		
REDUCING SUGAR	NIL		
MICROSCOPIC EXAMINATION			
PUS CELLS	1-2	2.00 -5.00	/ HPF
EPITHELIAL CELLS	NIL	NIL	/ HPF
RBC'S.	NIL	NIL	/HPF

Type of Sample :- BLOOD, URINE

Remark :-

Dr. APARNA JANAI
MBBS. DCP
Reg. No. 2002/01/202
(Consultant Pathologist)

(Technologist)

MAYA HOSPITAL & RESEARCH INSTITUTE

(Branch :- Janta colony Gudhiyari , Raipur)
PLOT NO. P-76, OPPOSITE TO SBI, MIDC, BUTIBORI
Contact: +91-9028040290 Email: hr@mayahospital.in

NABH Accredited

Test Details

Sr. No - 274 **DATE :- 19.03.2025**

EMP NAME :- VIMLESH SHIV KUMAR **AGE/SEX:- 23/MALE**

ADDRESS :- J. K. CEMENT WORKS, HAMIRPUR

Investigations	Observations	Biological Reference Interval	Unit
BLOOD SUGAR			
RANDOM BLOOD SUGAR	94	90.00 - 140.00	mg/dl
BLOOD GROUP	A+VE		
COMPLETE BLOOD COUNTS (CBC)			
HAEMOGLOBIN	13.5	13.00 - 18.00	g/dL
TLC	9600	4000.00 - 11000.00	/uL
PLATELET COUNT	2.36	1.50 - 4.50	lacs /cumm
RBC (RED BLOOD CELL COUNT)	4.03	3.80 - 5.20	million/uL
DLC (DIFFRENTIAL LEUCOCYTE COUNT)			
NEUTROPHIL	70	40.00 - 75.00	%
LYMPHOCYTE	25	20.00 - 45.00	%
EOSINOPHIL	02	1.00 - 6.00	%
MONOCYTES	05	1.00 - 10.00	%
ESR	06	0.00 - 15.00	mm/hr
LFT(LIVER FUNCTION TEST)			
T. BILIRUBIN	0.6	0.00 - 1.00	mg/dl
D.BILLURUBIN	0.2	0.00 - 0.30	mg/dl
I.BILLURUBIN	0.4	0.00 - 0.70	mg/dl

Dr. APARNA JANAI
MBBS. DCP
Reg. No. 2002/01/202

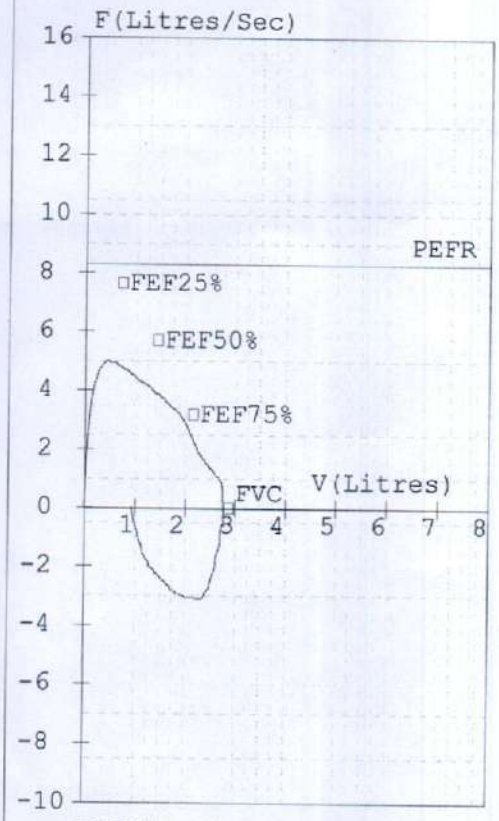
(Technologist)

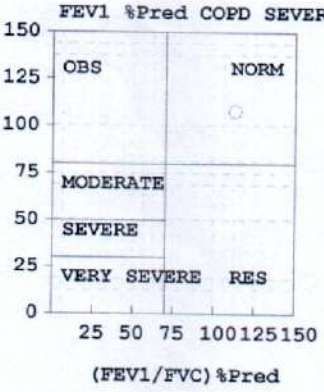
(Consultant Pathologist)

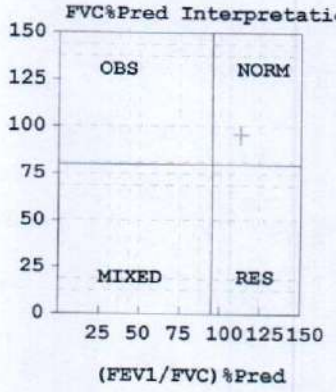
MAYA HOSPITAL & RESERCH INSTITUTE

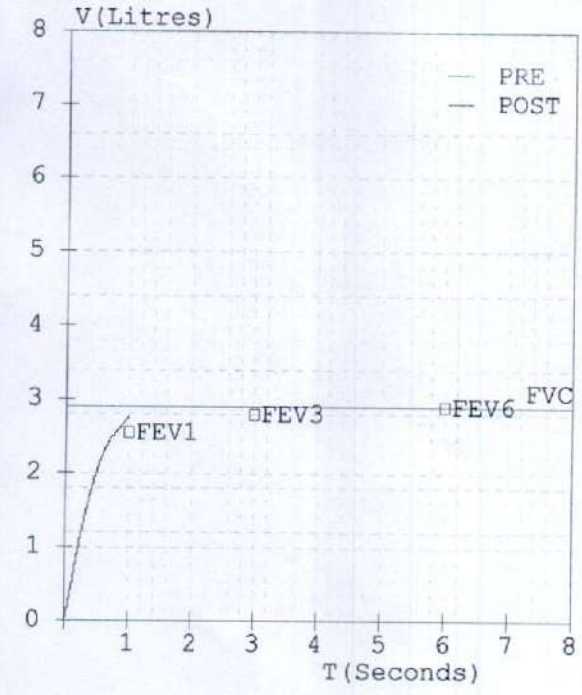
Janta Colony Gudhiyari Raipur

Patient: VIMLESH SHIV KUMAR	Age : 23 Yrs	Gender : Male	
Refd.By:	Height : 154 Cms	Smoker : No	
Pred.Eqns: RECORDERS	Weight : 49 Kgs	Eth. Corr: 100	
Date : 19-03-2025 11:27 AM	ID : 1864	Temp :	









FVC Results

Parameter		Pred	M.Pre	%Pred	M.Post	%Pred	%Imp
FVC	(L)	02.89	02.76	096	-----	---	---
FEV1	(L)	02.55	02.76	108	-----	---	---
FEV1/FVC	(%)	88.24	100.00	113	-----	---	---
FEF25-75	(L/s)	04.40	03.74	085	-----	---	---
PEFR	(L/s)	08.31	04.93	059	-----	---	---
FIVC	(L)	-----	01.80	---	-----	---	---
FEV.5	(L)	-----	02.05	---	-----	---	---
FEV3	(L)	02.80	02.76	099	-----	---	---
PIFR	(L/s)	-----	03.11	---	-----	---	---
FEF75-85	(L/s)	-----	01.98	---	-----	---	---
FEF.2-1.2	(L/s)	07.23	04.57	063	-----	---	---
FEF 25%	(L/s)	07.66	04.73	062	-----	---	---
FEF 50%	(L/s)	05.71	03.91	068	-----	---	---
FEF 75%	(L/s)	03.19	02.60	082	-----	---	---
FEV.5/FVC	(%)	-----	74.28	---	-----	---	---
FEV3/FVC	(%)	96.89	100.00	103	-----	---	---
FET	(Sec)	-----	01.01	---	-----	---	---
ExplTime	(Sec)	-----	00.09	---	-----	---	---
Lung Age	(Yrs)	023	021	091	-----	---	---
FEV6	(L)	02.89	-----	---	-----	---	---
FIF25%	(L/s)	-----	01.90	---	-----	---	---
FIF50%	(L/s)	-----	00.92	---	-----	---	---
FIF75%	(L/s)	-----	02.99	---	-----	---	---

Pre Test COPD Severity

Test within normal limits

Pre Medication Report Indicates

Early Small Airway Obstruction as FEF 25-75 %Pred or PEFR %Pred < 70

Spirometry within normal limits as (FEV1/FVC)%Pred >95 and FVC%Pred >80

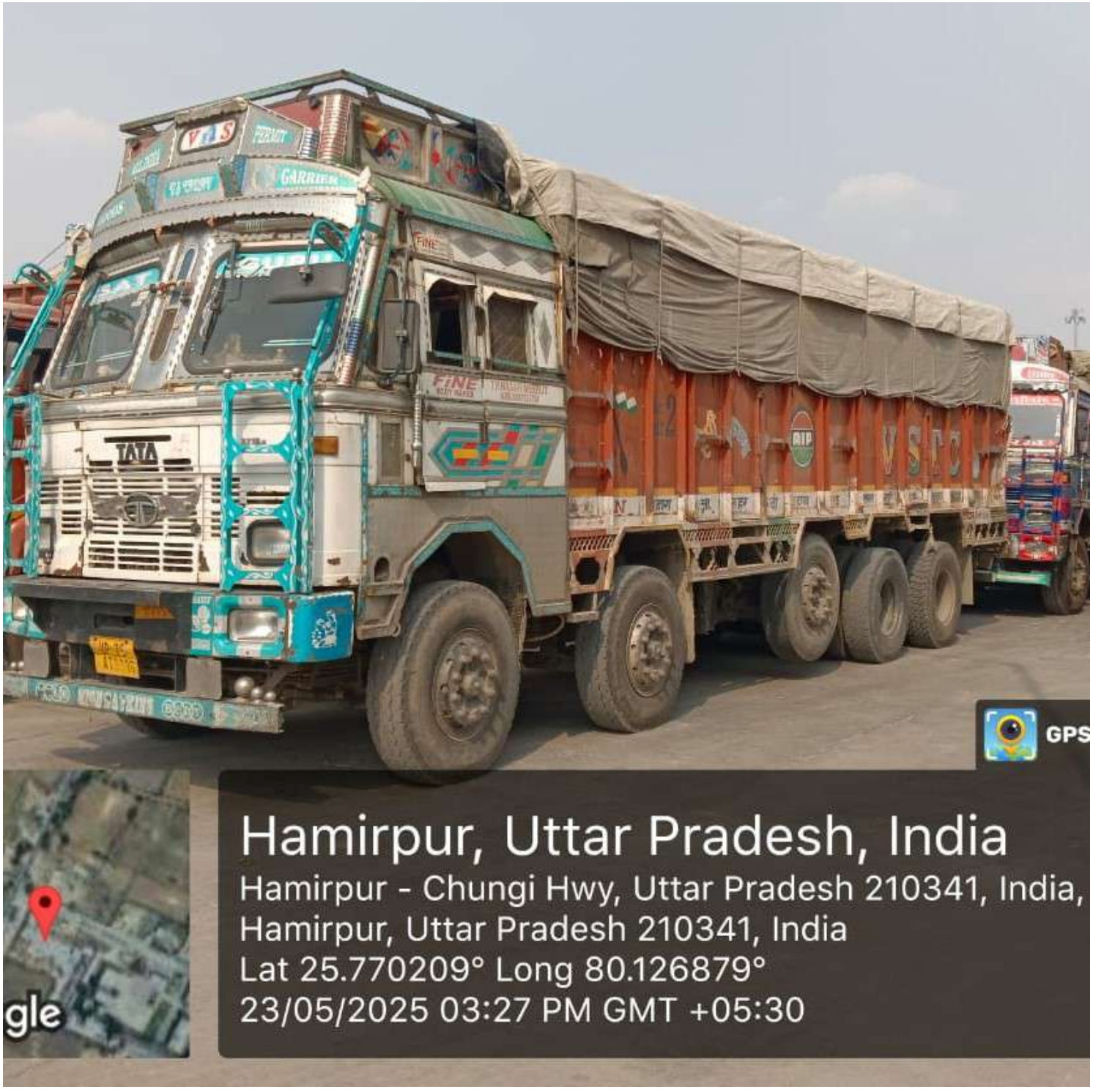
Dr. Shyam D. Deotale
D-Ortho AFIH
Certifying Surgeon
Reg.No. 2009/07/2941

Annexure - 3


10
Fatality
10
Serious
30
600
300,000
GPS Map Camera
Google
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.768893° Long 80.129007°
23/05/2025 03:42 PM GMT +05:30

Annexure - 4


GPS Map Camera
Google
Hamirpur, Uttar Pradesh, India
Hamirpur - Chungi Hwy, Uttar Pradesh 210341, India,
Hamirpur, Uttar Pradesh 210341, India
Lat 25.768089° Long 80.128336°
23/05/2025 04:02 PM GMT +05:30


TATA
GPS
gle
Hamirpur, Uttar Pradesh, India
Hamirpur - Chungi Hwy, Uttar Pradesh 210341, India,
Hamirpur, Uttar Pradesh 210341, India
Lat 25.770209° Long 80.126879°
23/05/2025 03:27 PM GMT +05:30

JK Cement Works, Hamirpur

Corporate Enviornment Responsbility FY 24-25

Sl.No	Focus area	Period / Month	Project Name	Area / Locality	Total Expenditure (Rs)	Photo
1	**Health**	June-24 to Jan-25	Under the compaigning of TB Mukt Bharat, we are continuesly supporting since last two years and this year also we had provided nutrition kit to 118 TB Patient at Maudha and Muskara for a continues period of six months	Maudaha and Muskara	591960	 
	Health	Nov-24 & Dec-24	Free health checkup camp organised for Eye Checkup, Dental Care, and TB Screening and 221 villagers have benifited under the compaign	Ingohta and Chandrapurva	45700	 
	Education	Jan-25	Provided Wooden study chairs (100 nos) & developed computer lab (7 computers) for Rural govt School in Chandpurva village.	Chandpurva	268361	 

	Education	Mar-25	Developed computer lab by providing 7 nos computer to Rural govt Schools in Ruri Para village	Ruri Para	147361	 
3	**Livelihood**	Feb-25	Installation of 17 nos Solar street light at village Inghota	Inghota	302260	 
	Rural Transformation	Nov-24	Garden development in Gyatri Kunj Park at TapoBhumi Ashram Sumerpur by 3 Nos cement benches & 3 Nos Swings.	Sumerpur	47200	 
	Rural Transformation	Nov-24	Enhancing Community Interaction and Social Well-Being through the Installation of 16 nos Cement Benches in Hamirpur District	Chaura Devi Tample, Shingheshwar, Tample, Meher Baba Ashram, Itara Tample, Roti Ram Tample and Sumerpur Railway Station	47200	 

	Rural Transformation	Jan-25	Construction of 02 Nos toilet and one bathroom in Tapobhumi Ashram, chandrapurva	Chandrapurva	217877	 
	Rural Transformation	Mar-25	Provided Water Cooler with RO in SP Office, Hamirpur & Police Station Sumerpur	Hamirpur	182400	 
	Rural Transformation	Mar-25	Provided Water Cooler at Khura Community Centre, Hamirpur	Khura	70100	
5	**Enviornment**	Mar-25	Promoting greenery environment by Installation of 100 Nos Tree Guard with plantation in Ingohta village and Chandrapurva village	Chandpurva/Inghota	155000	 

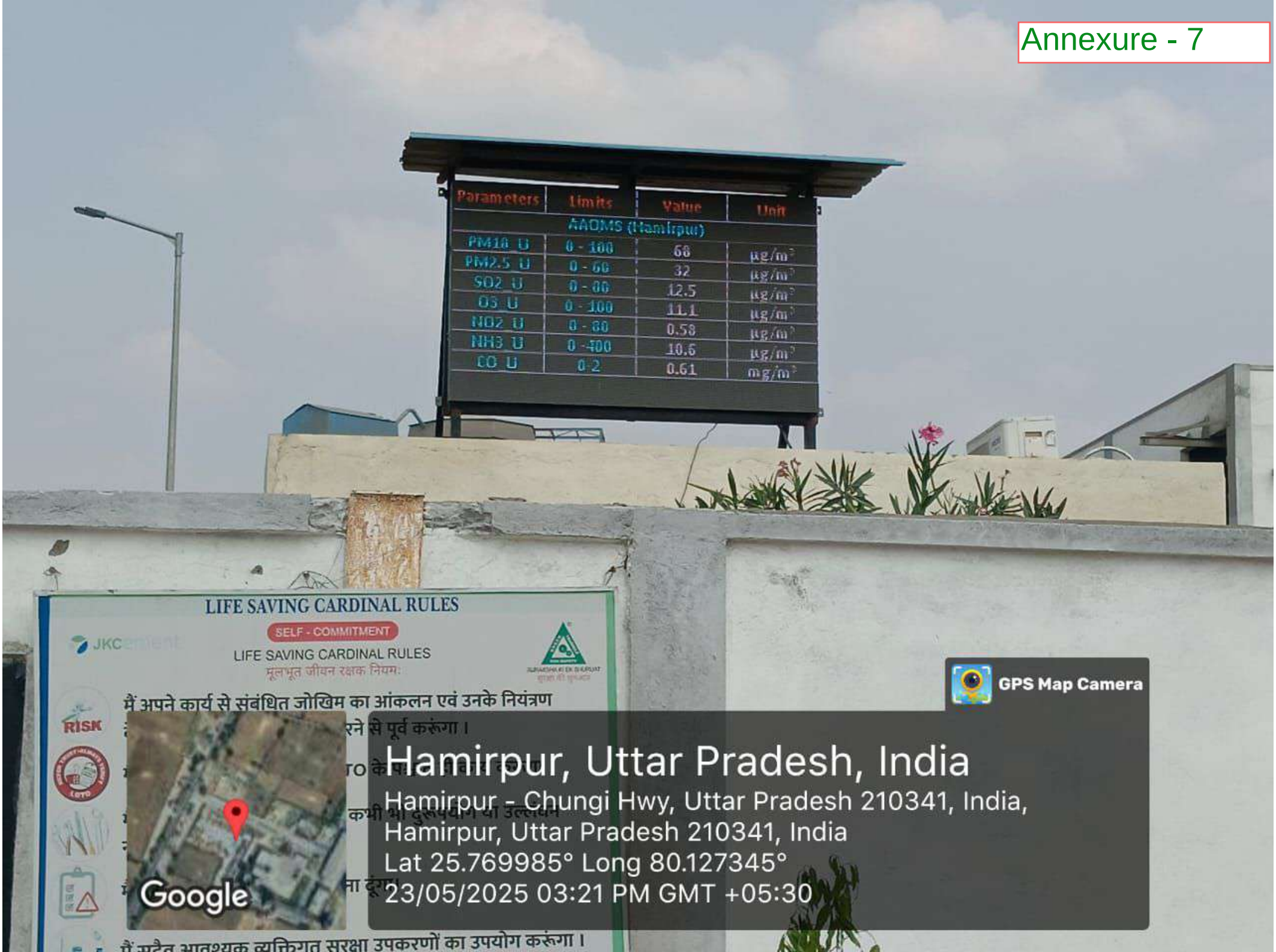
	Community development and other activities	Oct-24	Caring Comfort: Providing Support Through 100 nos Blankets to Vridh Ashram in Hamirpur and donation in Gaushala Ingohta village.	Hamirpur	23490	 
	Community development and other activities	Nov-24	The company contributed to the CER by carrying out the distribution of basic requirement flour (Atta) 9 quintal during Bandara from 16th to 19th Nov-24 at Meherbaba ashram, Hamirpur.	Hamirpur	16750	
	Community development and other activities	Jan-25	Enhancing Community Resilience through 600 nos Blanket distribution to Underprivileged Communities.	Inghota, Itara, Hamirpur	88716	 
	Community development and other activities	Jan-25	Promoting Road Safety awareness campaign in ITI Chandrapurva & provided 200 nos T-shirt to Students	Chandrapurva	16600	 
	Community development and other activities	Mar-25	Caring Comfort: Providing Support Through Cement Benches & 50 Nos Cement Bags to Singheswar Temple,	Hamirpur	17974	 

	Community development and other activities	Mar-25	On occasion of Women Days: providing Support Through daily used items kit (100 Nos) to Vridh Ashram in Hamirpur.	Hamirpur	32758		
	Community development and other activities	Mar-25	Provided 80 tonns Cement Bags to under construction Temple at Ambedkarnagar UP	Ambedkarnagar	480000		

Annexure - 6


GPS Map Camera
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.76848° Long 80.12912°
23/05/2025 03:45 PM GMT +05:30
Google

Annexure - 7


Parameters
Limits
Value
Unit
AAQMS (Hamirpur)
PM10 U
0 - 100
68
µg/m³
PM2.5 U
0 - 60
32
µg/m³
SO2 U
0 - 80
12.5
µg/m³
O3 U
0 - 100
11.1
µg/m³
NO2 U
0 - 80
0.58
µg/m³
NH3 U
0 -400
10.6
µg/m³
CO U
0-2
0.61
mg/m³
LIFE SAVING CARDINAL RULES
SELF - COMMITMENT
LIFE SAVING CARDINAL RULES
मूलभूत जीवन रक्षक नियम:
RISK
GPS Map Camera
Hamirpur, Uttar Pradesh, India
Hamirpur - Chungi Hwy, Uttar Pradesh 210341, India,
Hamirpur, Uttar Pradesh 210341, India
Lat 25.769985° Long 80.127345°
23/05/2025 03:21 PM GMT +05:30
Google

Annexure - 7.1


GPS Map Camera
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.768719° Long 80.129423°
23/05/2025 04:27 PM GMT +05:30
Google

Ambient Air Quality Monitoring

24 Hourly AAQ Monitoring Data with Locations (In µg/m³)

Location 1 (WTP AREA)															
	PM 2.5			PM 10			SO2			NOx			CO		
Std Limit	60 µg/m3			100 µg/m3			80 µg/m3			80 µg/m3			2 mg/m3		
Month	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
Oct-24			35			75			16.2			24.3			0.6
Nov-24			34			73			17.5			25.3			0.5
Dec-24			32.2			71.3			17.6			24.2			0.56
Jan-25			33			70			18.4			25.4			0.6
Feb-25			49			71			21.5			26.1			0.7
Mar-25			44			75			23.2			29.3			0.6

Location 2 (TOWER NO.01)															
	PM 2.5			PM 10			SO2			NOx			CO		
Std Limit	60 µg/m3			100 µg/m3			80 µg/m3			80 µg/m3			2 mg/m3		
Month	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
Oct-24			33			64			14.6			22.3			0.6
Nov-24			32			66			15.7			21.6			0.6
Dec-24			32			67			16.5			22.4			0.6
Jan-25			34			68			17.3			23.5			0.6
Feb-25			59			92			21.3			28.4			0.5
Mar-25			51			86			22.3			31.2			0.8

Location 3 (TOWER NO.02)															
	PM 2.5			PM 10			SO2			NOx			CO		
STD Limit	60 µg/m3			100 µg/m3			80 µg/m3			80 µg/m3			2 mg/m3		
Month	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
Oct-24			35			69			17.2			25.3			0.7
Nov-24			36			69			18.2			26.3			0.7
Dec-24			35			69			19.4			25.6			65.0
Jan-25			35			70			20.6			24.7			0.6
Feb-25			50			90			21.5			28.4			0.6
Mar-25			52			86			24.3			31.0			0.7

Location 1 (TOWER NO.03)															
	PM 2.5			PM 10			SO2			NOx			CO		
Std Limit	60 µg/m3			100 µg/m3			80 µg/m3			80 µg/m3			2 mg/m3		
Month	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
Oct-24			31			64			14.1			22.3			0.6
Nov-24			34			66			15.8			24.3			0.6
Dec-24			36			67			16.7			26.4			0.6
Jan-25			36			68			17.4			25.6			0.7
Feb-25			45			71			19.8			26.5			0.7
Mar-25			47			70			19.2			22.4			0.7

Annexure - 10


GPS Map Camera
Hamirpur, Uttar Pradesh, India
Hamirpur - Chungi Hwy, Uttar Pradesh 210341, India,
Hamirpur, Uttar Pradesh 210341, India
Lat 25.769403° Long 80.128605°
23/05/2025 03:33 PM GMT +05:30
Google

Annexure - 11

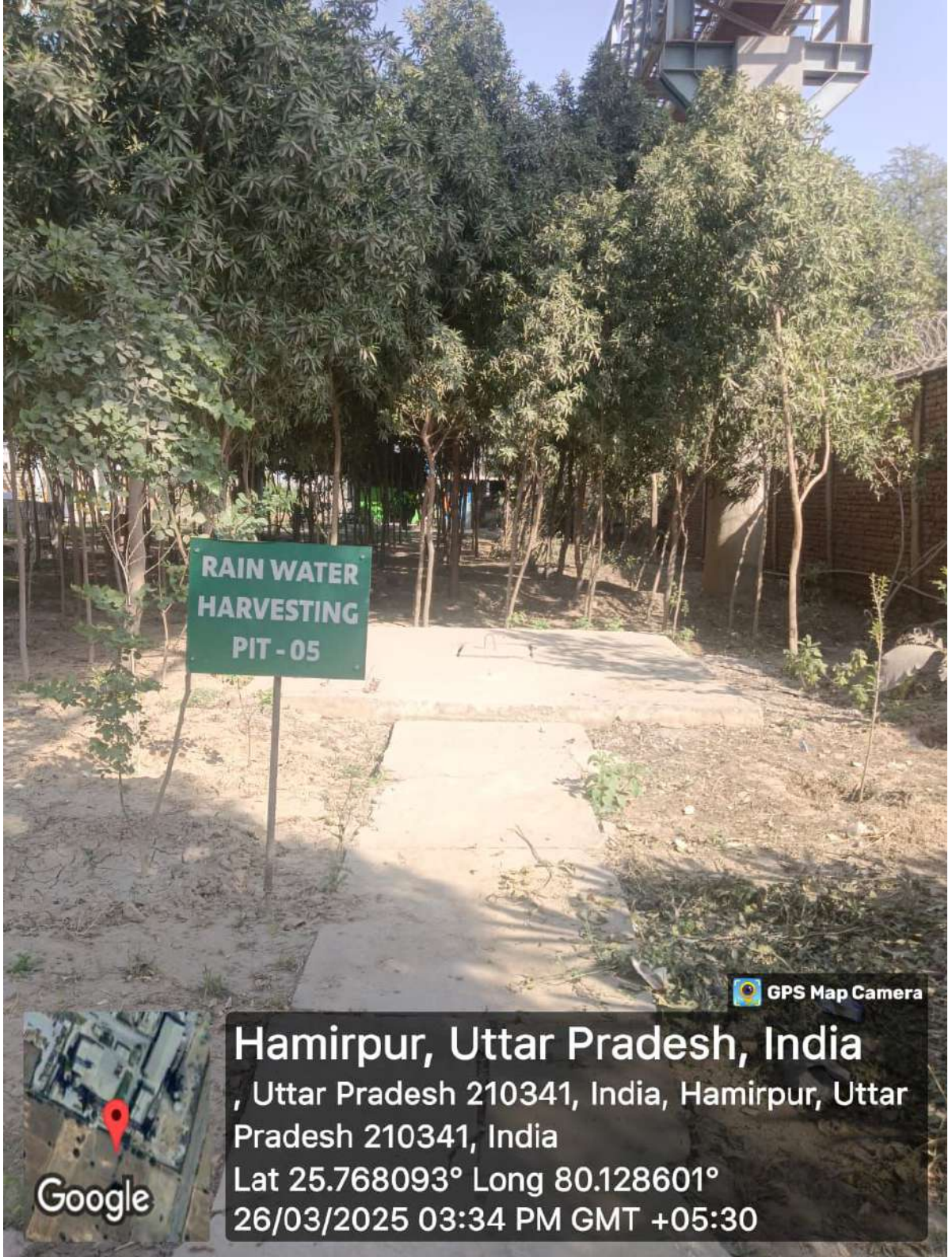

10
Fatality
10
Serious
30
600
300,000
GPS Map Camera
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.768893° Long 80.129007°
23/05/2025 03:42 PM GMT +05:30
Google

STACK MONITORING	
Stack Name	**Cement Mill-I**
Parameter	**PM**
Std Limit (mg/Nm³)	
Oct-24	25.7
Nov-24	18.5
Dec-24	20.3
Jan-25	19.4
Feb-25	23.5
Mar-25	22.9
Minimum	19
Maximum	26
Average	21.72

Ground Water Monitoring Report								
Sr. No	Parameter (mg/L)	UOM	BOREWELL NEAR WTP					
			24-Oct	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar
1	Colour	mg/l	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	mg/l	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	-	7.04	7.58	7.35	7.07	8.72	7.83
4	Turbidity	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	Total Dissolved Solids	mg/l	598	748	536	686	97.3	165
6	Aluminium (as Al)	mg/l	-	-	-	-	-	-
7	Ammonia(as NH3-N)	mg/l	-	-	-	-	-	-
8	Anionic Detergents (as MBAS,	mg/l	-	-	-	-	-	-
9	Barium (as B)	mg/l	-	-	-	-	-	-
10	Boron (as B)	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
11	Calcium (as Ca)	mg/l	<0.02	<0.02	<0.02	<0.02	11.2	<0.02
12	Chloramines (as Cl2)	mg/l	-	-	-		-	-
13	Chloride (as Cl)	mg/l	71.9	73.9	65.4	51.9	17.9	32.7
14	Copper (as Cu)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
15	Fluoride (as F)	mg/l	0.52	0.45	0.39	0.32	0.12	0.16
16	Free Residual Chlorine	mg/l	BDL	BDL	BDL	BDL	BDL	BDL
17	Iron (as Fe)	mg/l	0.2	0.28	0.22	0.25	0.1	BDL
18	Magnesium (as Mg)	mg/l	28.6	19.3	31.3	43.7	6.7	16.8
19	Magnese (as Mn)	mg/l	-	-	-	-	-	-
20	Nitrate (as NO3)	mg/l	BDL	BDL	BDL	BDL	BDL	BDL
21	Phenolic Compounds (as C6H5OH)	mg/l	-	-	-	-	-	-
22	Selenium (as Se)	mg/l	-	-	-	-	-	-
23	Silver (as Ag)	mg/l	-	-	-	-	-	-
24	Sulphate (as SO4)	mg/l	10.3	11.5	10.3	9.4	BDL	BDL
25	Sulphide (as H2s)	mg/l	-	-	-	-	-	-
26	Total Alkanity (as CaCO3)	mg/l	-	-	-	-	-	-
27	Total Hardness (as CaCO3)	mg/l	281	324	245	292	32.4	113
28	Zinc (as Zn)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
29	Cadmium (as Cd)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
30	Cynide (as CN)	mg/l	-	-	-	-	-	-
31	Lead (Pb)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
32	Mercury (as Hg)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
33	Molybdenum (as Mo)	mg/l	-	-	-	-	-	-
34	Nickel (as Ni)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
35	Arsenic (as As)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
36	chromium	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
37	Escherichia Coll	mg/l	-	-	-	-	-	-
38	Total Collforms	mg/l	-	<1.8	<1.8	<1.8	<1.8	<1.8

Annexure - 14


S.T.P.
DANGER
खतरा
GPS Map Camera
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.767969° Long 80.129002°
23/05/2025 03:48 PM GMT +05:30
Google


RAIN WATER
HARVESTING
PIT - 05
GPS Map Camera
Hamirpur, Uttar Pradesh, India
, Uttar Pradesh 210341, India, Hamirpur, Uttar Pradesh 210341, India
Lat 25.768093° Long 80.128601°
26/03/2025 03:34 PM GMT +05:30
Google

Ambient Noise Level Monitoring												
	Oct-24		Nov-24		Dec-24		Jan-25		Feb-25		Mar-25	
	Day time	Night Time	Day time	Night Time	Day time	Night Time	Day time	Night Time	Day time	Night Time	Day time	Night Time
Prescribed Limits dB (A) Leq	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Location 1 (Truck Yard)	61.5	52.3	60.7	51.2	59.4	50.7	58.4	49.2	66.3	59.4	68.4	60.2
Location 2 (HOPPER GLANDING AREA)	66.2	54.7	64.8	52.7	63.2	53.4	62.4	52.7	66.9	57.4	63.5	54.3
Location 3 (TOWER NO. 03)	64.3	52.2	63.5	49.7	60.2	46.7	61.5	45.7	65.4	51.7	68.2	53.4
Location 4 (WTP AREA)	62.5	51.8	63.8	53.4	62.8	52.4	61.5	53.4	73.5	63.7	70.2	64.7
Minimum	**61.5**	**51.8**	**60.7**	**49.7**	**59.4**	**46.7**	**58.4**	**45.7**	**65.4**	**51.7**	**63.5**	**53.4**
Maximum	**66.2**	**54.7**	**64.8**	**53.4**	**63.2**	**53.4**	**62.4**	**53.4**	**73.5**	**63.7**	**70.2**	**64.7**


R.S. INDUSTRIL SOLUTIONS
ORGANIC WASTE COMPOST MACHINE
Latitude: 25.768078
Longitude: 80.129032
Elevation: 142.96±4 m
Accuracy: 35.0 m
Time: 08-01-2025 16:50
Powered by NoteCam

JKcement

Corporate Environment Policy

JK Cement Limited is committed to ensure clean, green and healthy environment for sustainable development through:

- ✓ By ensuring that the activities of the company comply with all the relevant laws, regulations and industry and applicable codes of standards and practices, as well as to take any additional measures considered necessary.
- ✓ By involving all employees in implementation of the Company's policy and imparting appropriate training, providing for dissemination of information to employees on Environmental objectives and performance through suitable communication networks.
- ✓ By involving the Suppliers, Vendors, Customers, Clients and other Business Associates to promote awareness among them for their responsibility towards Environment and to encourage their participation in achieving our Environmental Goals.
- ✓ Continuously improve in effectiveness of environmental management with proper systems to prevent, mitigate and control environmental impacts due to operations across the value chain and local community.
- ✓ By building awareness to all stakeholders including employees, customers, vendors etc. on environmental issues as well as compliance of relevant environmental legislation by implementing the environmental management system.
- ✓ By improvement in environment management, efficient use of natural resources, energy & plant equipment.
- ✓ By promoting reuse and recycling wastes, reduction in emission, noise, waste and greenhouse gases.
- ✓ By greenbelt development for local bio-diversity management and conservation in coalition with local communities, authorities and other stakeholders.
- ✓ By reporting of non-compliances (if any), violations of environmental norms of the conditions of environment clearance/ consent/ NOC/ authorization and permission etc. relevant to the environmental conditions, wherever required to the director and occupier by the respective Unit Head, Administrative Head, Technical Head and Environment Head so as to fulfill the deviation from compliances as and when required.

JK Cement is implementing due diligence as an essential activity in merges and acquisitions (M&A) transactions.

This policy will be reviewed periodically and updated as may be required. This Policy shall be made known to all our customers and stakeholders, apart from all our employees.

Anuj Khandelwal

Anuj Khandelwal

Business Head

-: सार्वजनिक सूचना :-

आम जनता को सूचित किया जाता है कि राज्य स्तरीय पर्यावरण प्रभाव मूल्यांकन प्राधिकरण, उत्तर प्रदेश ने अपनी फाइल संख्या-9371-9037 दिनांक 16 जनवरी 2025 के माध्यम से मेसर्स जेके सीमेन्ट लिमिटेड को ग्राम इंगोहटा, परगना-सुमेरपुर, तहसील और जिला हमीरपुर उत्तर प्रदेश में मौजूदा स्टैंड-अलोन ग्राइंडिंग यूनिट की प्रक्रिया अनुकूलन द्वारा सीमेन्ट उत्पादन क्षमता को 2.0 मिलियन टीपीए से 3.0 मिलियन टीपीए तक बढ़ाने के प्रस्ताव के लिए पर्यावरणीय मंजूरी प्रदान की है। मंजूरी पत्र 04 फरवरी, 2025 को प्राप्त हुआ। उपर्युक्त मंजूरी पत्र की एक प्रति राज्य प्रदूषण नियंत्रण बोर्ड के कार्यालय में जनता के अवलोकन के लिए उपलब्ध है और इसे पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की वेबसाइट https://parivesh.nic.in पर भी देखा जा सकता है।

मेसर्स जेके सीमेन्ट लिमिटेड
कमला टावर, कानपुर उत्तर प्रदेश 208001
ई-मेल : bhaskar.rawat@jkcement.com

डा. सचिन गुप्ता
यूनिट प्रमख
जे के सीमेन्ट लिमिटेड
ग्राम इंगोहटा, जिला हमीरपुर

JK Cement Works, Hamirpur
(Formerly known as Jaykaycem (Central) Ltd. now amalgamated)
A unit of JK Cement Ltd.
CIN: L17229UP1994PLC017199
Village : Ingohata, Pargana - Sumerpur
District : Hamirpur, Uttar Pradesh - 210502

Ref. No: JKH/HGV/87 Date: 10/02/2025

To,

The Gram Panchayat,

Village: Ingohta,

Tehsil & District: Hamirpur (Uttar Pradesh)

Subject: Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Ltd. - ***Submission of Copy of Environment Clearence.***

Ref.: Environment Clearance letter issued by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Sir,

With reference to the aforesaid subject; we would like to inform you that M/s. JK Cement Ltd. has proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana: Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh for which Environment Clearance has been granted by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Now, as pe the EC Condition no. 12.2, we are hereby submitting you the copy of Environment Clearance for the above said project for your kind consideration & record.

Thanking you & with regards,

For JK Cement Ltd.

ग्राम पंचायत, इंगोहटा प्रधान (जि. हमीरपुर) 10/02/25

Dr. Sachin Gupta
Unit Head & Authorized Signatory

Encl: As above

Village : Ingohta, Pargana : Sumerpur
District : Hamirpur, Uttar Pradesh - 210502

Ref. No. JK/HMP/80

Date. 10/02/2025

To,

The District Collector,

Hamirpur, Uttar Pradesh

Subject: Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Ltd. - ***Submission of Copy of Environment Clearence.***

Ref.: Environment Clearance letter issued by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

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Thanking you & with regards,

For JK Cement Ltd.

Dr. Sachin Gupta
Unit Head & Authorized Signatory

10/02/25

Encl: as above

JKC

Village: Ingona a Pargana: Sumerpur
District: Hamirpur, Uttar Pradesh 21050?

Ref. No. JK/HMU/79 Date: 10/02/2025

To,

The Chief Executive Officer,

Zila Parishad,

Hamirpur (Uttar Pradesh)

Subject: Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Ltd. - ***Submission of Copy of Environment Clearence.***

Ref.: Environment Clearance letter issued by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Sir,

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Now, as pe the EC Condition no. 12.2, we are hereby submitting you the copy of Environment Clearance for the above said project for your kind consideration & record.

Thanking you & with regards,

For JK Cement Ltd.

Dr. Sachin Gupta
Unit Head & Authorized Signatory

जिला पंचायत कार्यालय हमीरपुर

प्राप्त किया

10/02/2025

Encl: as above

Corporate Office
Prism Tower, 5th Floor, Ninaniya Estate,
Gwal Pahari, Gurugram - 122102, Haryana
+0124-6919000
admin.prismt@jkcement.com
www.jkcement.com

JK SUPER CEMENT BUILD SAFE

JK CEMENT WallMaxX White Cement Wall Putty

Manufacturing Units at :
Nimbahera, Mangrol, Gotan (Rajasthan) | Muddapur (Karnataka) | Jharli (Haryana)
Katni, Panna (M.P.) | Aligarh, Hamirpur (U.P.) | Balasinor (Gujarat) | Fujairah

Registered Office : Kamla Tower, Kanpur-208001, U.P., India. +91-512-2371478 to 85 91-512-2399854 www.jkcement.com

JKC

Village: Ingohta, Pargana: Sumerpur,
District: Hamirpur, Uttar Pradesh - 210502

Ref. No.: JK/HGU/77 Date: 10/02/2025

To,

The District Industries Centre,

Hamirpur-210301

Subject: Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Ltd. - ***Submission of Copy of Environment Clearence.***

Ref.: Environment Clearance letter issued by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Sir,

With reference to the aforesaid subject; we would like to inform you that M/s. JK Cement Ltd. has proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana: Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh for which Environment Clearance has been granted by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Now, as pe the EC Condition no. 12.2, we are hereby submitting you the copy of Environment Clearance for the above said project for your kind consideration & record.

Thanking you & with regards,

For JK Cement Ltd.

Dr. Sachin Gupta
Unit Head & Authorized Signatory

Encl: as above

प्राप्तकर्ता द्वारा
10-2-2025

Corporate Office
Prism Tower, 5th Floor, Ninaniya Estate,
Gwal Pahari, Gurugram - 122102, Haryana
+0124-6919000
admin.prismt@jkcement.com
www.jkcement.com

JK SUPER CEMENT BUILD SAFE

JK CEMENT WallMax X White Cement Wall Putty

Manufacturing Units at :
Nimbahera, Mangrol, Gotan (Rajasthan) | Muddapur (Karnataka) | Jharli (Haryana)
Katni, Panna (M.P.) | Aligarh, Hamirpur (U.P.) | Balasinor (Gujarat) | Fujairah

Registered Office : Kamla Tower, Kanpur-208001, U.P., India. +91-512-2371478 to 85 91-512-2399854 www.jkcement.com

Ref. No.: JK/HGU/78

Date... 10/02/2025

To,

Regional Officer,
Uttar Pradesh Pollution Control Board,
Regional Office, Banda
Gate no 2, Tulsi Nagar, Indira Nagar,
Banda, Uttar Pradesh

Subject: Proposed Expansion in Cement Production Capacity from 2.0 Million TPA to 3.0 Million TPA by process optimization of Existing Stand - alone Grinding Unit at Village: Ingohta, Pargana - Sumerpur, Tehsil & District: Hamirpur, Uttar Pradesh by M/s. JK Cement Ltd. - ***Submission of Copy of Environment Clearence.***

Ref.: Environment Clearance letter issued by SEIAA, Uttar Pradesh *vide* File No: 9371 - 9037 dated 16th Jan., 2025 received on 4th Feb.,2025.

Sir,

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Now, as pe the EC Condition no. 12.2, we are hereby submitting you the copy of Environment Clearance for the above said project for your kind consideration & record.

Thanking you & with regards,

For JK Cement Ltd.

Dr. Sachin Gupta
Unit Head & Authorized Signatory

Encl: as above

RO (EC copy submission)

DTDC Express Limited
Regd. Office No. 3, Victoria Road
Bengaluru - 560047

Origin:

PRODUCT: **EXPRESS**

Dest:

Type: **DOCUMENT**

Date: Mon Feb 10 2025

Consignor's Name:
Consignor's Address: **210502**
GSTIN No.:
Phone: **Email :**

Customer Ref No:
Consignee's Name:
Consignee's Address: **banda, 210001**
GSTIN No.:
Phone: **0000000000** Email :

Content Specification :

Paperwork Enclosed :

Declared Value: **Not Applicable**
No Of Pieces: **Not Applicable**
Actual Weight: **0 Gms**

I/We declare that this consignment does not contain personal mail, cash, jewellery, contraband, illegal drugs, any prohibited items and commodities which can cause safety hazards while transporting

Sender's Signature & Seal
I have read and understood terms & conditions of carriage mentioned on website www.dtdc.in, and I agree to the same.

Ewaybill Number:

Dim: **Not Applicable**
Charged weight: **0 Gms**

Name : Sumerpur
Address: Near bus stand sumerpur, hamirpur, KANPUR, Pincode:210301, HAMIRPUR (HP), HIMACHAL PRADESH, 210502
Phone : 7985399540

AWB No: **U34822970**

Risk Surcharge

Owner ☐

Carrier ☐

https://www.dtdc.in | customersupport@dtdc.com | +91-9606911811

Amount collected (in Rs.):

THIS DOCUMENT IS NOT A TAX INVOICE. WEIGHT CAPTURED BY DTDC WILL BE USED FOR INVOICE GENERATION. Sender's Copy

---

DTDC Express Limited
Regd. Office No. 3, Victoria Road
Bengaluru - 560047

Origin:

PRODUCT: **EXPRESS**

Dest:

Type: **DOCUMENT**

Date: Mon Feb 10 2025

Consignor's Name:
Consignor's Address: **210502**
GSTIN No.:
Phone: **Email :**

Customer Ref No:
Consignee's Name:
Consignee's Address: **banda, 210001**
GSTIN No.:
Phone: **0000000000** Email :

Content Specification:

Paperwork Enclosed :

Declared Value: **Not Applicable**
No Of Pieces: **Not Applicable**
Actual Weight: **0 Gms**

I/We declare that this consignment does not contain personal mail, cash, jewellery, contraband, illegal drugs, any prohibited items and commodities which can cause safety hazards while transporting

Sender's Signature & Seal
I have read and understood terms & conditions of carriage mentioned on website www.dtdc.in, and I agree to the same.

Ewaybill Number:

Dim: **Not Applicable**
Charged weight: 0 Gms

Name : Sumerpur
Address: Near bus stand sumerpur, hamirpur, KANPUR, Pincode:210301, HAMIRPUR (HP), HIMACHAL PRADESH, 210502
Phone : 7985399540

AWB No: **U34822970**

Risk Surcharge

Owner ☐

Carrier ☐

https://www.dtdc.in | customersupport@dtdc.com | +91-9606911811

Amount collected (in Rs.):

THIS DOCUMENT IS NOT A TAX INVOICE. WEIGHT CAPTURED BY DTDC WILL BE USED FOR INVOICE GENERATION. Account's Copy

---

DTDC Express Limited
Regd. Office No. 3, Victoria Road
Bengaluru - 560047

Origin:

PRODUCT: **EXPRESS**

Dest:

Type: **DOCUMENT**

Date: Mon Feb 10 2025

Consignor's Name:
Consignor's Address: **210502**
GSTIN No.:
Phone: Email :

Customer Ref No:
Consignee's Name:
Consignee's Address: **banda, 210001**
GSTIN No.:
Phone: **0000000000** Email :

Content Specification:

Paperwork Enclosed :

Declared Value: **Not Applicable**
No Of Pieces: **Not Applicable**
Actual Weight: **0 Gms**

I/We declare that this consignment does not contain personal mail, cash, jewellery, contraband, illegal drugs, any prohibited items and commodities which can cause safety hazards while transporting

Sender's Signature & Seal
I have read and understood terms & conditions of carriage mentioned on website www.dtdc.in, and I agree to the same.

Ewaybill Number:

Dim: **Not Applicable**
Charged weight: **0 Gms**

Name : Sumerpur
Address: Near bus stand sumerpur, hamirpur, KANPUR, Pincode:210301, HAMIRPUR (HP), HIMACHAL PRADESH, 210502
Phone : 7985399540

AWB No: **U34822970**

Receiver's Name :

Phone Number :

Receiver's Signature and Stamp

https://www.dtdc.in | customersupport@dtdc.com | +91-9606911811

Amount collected (in Rs.):

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