

SUMMARY OF BASELINE

M/s. JK Cement Ltd. is proposing a Standalone Clinker Grinding Unit with Cement Production Capacity of 4.0 Million TPA along with installation of D.G. Set of Capacity 1 MW at Khasra Nos. 04,05,12 & & others, Villages: Menhmarara & Kant, Tehsil-Dumraon, District -Buxar, Bihar.

Table: 1

Project Proposal

S. No.	Particular	Unit	Proposed Production Capacity
1.	Cement (PPC & OPC/PSC/Blended Cement/LC3)	Million TPA	4.0
2.	D.G. Sets	MW	1.0

Environmental Baseline Study for One Season (i.e Summer March to May 2024 season) has been done for Air, Water, Noise and Soil along with details of flora, fauna and socio-economic conditions within the study area. EIA/EMP Report will cover all the environmental aspects i.e. air pollution, noise pollution, water pollution, land environment and solid waste management etc. in terms of the impacts on the environment due to the proposed activity and the environmental management plan to reduce the impacts. *Structure of EIA will be as follows:*

1. Introduction
2. Project Description
3. Description of Environment
4. Anticipated Environmental Impacts & Mitigation Measures
5. Analysis of Alternatives (Technology & Site)
6. Environmental Monitoring Programme
7. Additional Studies
8. Project Benefits
9. Environmental Cost Benefit Analysis
10. Environmental Management Plan
11. Summary & Conclusion
12. Disclosure of Consultant engaged

Establishment of Baseline for Valued Environmental Components

Baseline data collection for the proposed expansion project using various environmental components /parameters in the core as well as buffer zone has been done during the study period (i.e Summer season - March to May 2024) details of which are given in table below.

Table - 2

Baseline Data Collection

		Primary Data
--	--	---------------------

S. No.	Environmental Component	Parameters	Frequency	Monitoring / Sampling Locations
1.	Land	Agriculture, Habitation, Industry, Stony waste/ Quarries, Forest area, Plantation/ Vegetation, Open scrub, Water bodies etc.	Once in a Season	10 km radius study area
2.	Meteorology	Temperature, Relative Humidity, Wind Speed, Wind Direction.	Hourly	01 (Plant site)
3.	Air	PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , CO & NH ₃	Twice a week (24 hourly)	08
4.	Noise	Equivalent noise levels in Leq in dB (A)	Once in a season (Day & Nighttime)	08
5.	Water			
a.	Surface Water	Parameters as per IS 10500 - 2012	Once in a season	08
b.	Ground Water		Once in a season	08
7.	Soil	Parameters as per IS 2720/USDA	Once in a season	08
8.	Biological Environment	Flora and Fauna	Once in a season	Study area
9.	Socio- Economic Environment	Economic Demography	Once in a season	Study area

✓ **Locations of Ambient Air Quality Monitoring**

Sampling locations has been selected for AAQ monitoring keeping in view the pre-dominant wind direction prevailing in the area during the study period and as per the IMD data.

Nearest IMD station to the Plant site is Bagalkot. The dominant wind direction during the study period, as per IMD, is from the East direction.

Monitoring stations selected for Ambient Air Quality Monitoring during the study period are given in table - 3 and shown in figure - 1.

Table - 3
Locations of Ambient Air Quality Monitoring Stations

S. No.	Monitoring stations	Tentative distance (from boundary) & direction (from centre point)	Selection Criteria
1.	Project Site	-	Core Zone
2.	Kant Village	1.5 KM (NNW direction)	➤ Nearest Habitation
3.	Sikaria Station	ESE direction (1.5 KM)	➤ Railway track
4.	Raghunathpur	2.0 KM (West direction)	➤ Downwind of pre-dominant wind direction
5.	Bankat Village	2.0 KM (East direction)	➤ Upwind of Pre-dominant Wind direction
6.	Shivpur Village	2.0 KM (North direction)	➤ Cross Up wind direction
7.	Tiyar Village	3.5 KM (South direction)	➤ Cross down wind direction
8.	Baruhan village	4.0 KM (South direction)	➤ Upwind of cross dominant Wind direction

✓ **Locations of Noise Level Monitoring**

Locations / stations selected for noise level monitoring are given in Table - 4

Table - 4
Locations of Ambient Noise Level Monitoring Stations

S. No.	Monitoring stations	Tentative distance (from plant lease boundary) & direction (from center point)
S1	Project Site	-
S2	Bankat village	1.7 km (SSW direction)
S3	Raghunathpur village	1.8 km (ESE direction)
S4	Banswar village	2.0 KM (West direction)
S6	Sikariya village	2.0 km (North direction)
S7	Shivpur village	2.0 KM (East direction)
S8	Dharampura	2.5 km (West direction)

✓ **Locations of Surface Water Sampling**

Locations / stations selected for surface water sampling are given in table - 5 & shown in figure -3.

Table - 5
Location of Surface Water Sampling

S. No.	Sampling Stations	Distance & Direction
S2	Bhagar Nadi	1.5 KM (East direction)
S3	Chher Nadi	2 KM (East direction)
S4	Hetampur distributary	3.0 KM (East direction)
S5	Raghnathpur distributary	3.5 KM (west direction)
S1	Dharamwati Nadi	6.0 KM (NNW direction)
S6	Sikariya distributary	8.0 KM (NW direction)
S7	Nala	8.0 KM (WSW direction)
S8	Ariawan distributary	Adjacent (East direction)

✓ **Locations of Ground Water Sampling**

Locations / stations selected for ground water sampling are given in table - 5 & shown in figure -4.

Table – 6
Locations of Ambient Ground Water Sampling Stations

S. No.	Sampling Station	Tentative distance (from boundary) & direction (from center point)
1.	Project Site	-
2.	Kant Village	1.5KM (NNW direction)
3.	Sikariya Village	2.0 KM (ESE Direction)
4.	Bankat Village	2.0KM (East direction)
5.	Rahathua Village	5.0 KM (West direction)
6.	Garhatha khurd	6.5 KM (NW direction)
7.	Araila village	7.5 KM (SSE direction)
8.	Sowan village	9.0 KM (NW direction)

✓ **Locations of Soil Sampling**

Locations / stations selected for Soil are given in table - 7 & shown in figure -4.

Table – 7
Locations of Ambient Soil Sampling Stations

S. No.	Sampling Station	Distance & direction
1.	Project Site	-
2.	Kant Village	1.5KM (NNW direction)
3.	Sikariya Village	2.0 KM (ESE Direction)
4.	Bankat Village	2.0KM (East direction)
5.	Rahathua Village	5.0 KM (West direction)
6.	Garhatha khurd	6.5 KM (NW direction)
7.	Araila village	7.5 KM (SSE direction)
8.	Sowan village	9.0 KM (NW direction)