

JK Cement Works, Muddapur

(Unit: J.K. Cement Ltd) CIN: L17229UP1994PLC017199

♠ Works : P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India 

**\(\sigma\)** +91-8350-289607

Through: Courier Service

Reg.No. JKCW/ENV/Env. Statement/ICP/2023-24/60/19

Date: 08.09.2023

The Member Secretary, Karnataka State Pollution Control Board, # 49, 4th& 5th floor, Parisara Bhavana, Church Street,

Dear Sir,

Bangalore - 560 001.

Sub: Submission of Environmental Statement Report in "Form-V" FY 2022-23 of Integrated Cement & Captive Power Plant of JK Cement works, Muddapur, (Unit: JK Cement Ltd) located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-reg

Ref:-1 Notification No.Vide GSR 329 (E)dated 13.03.92 and GSR 386 (E)dated 22.04.1993.

Ref:-2 Vide Combined Consent Order AW-326481 dated 30.08.2021.

As mentioned in the above cited subject matter, we are here by submitting the "Environmental Statement Report" FY 2022-23 in the prescribed format (Form V) under Environment (Protection) Rules, 1986 pertaining to our Integrated Cement & Captive Power Plant located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka

Kindly acknowledge the same.

Yours faithfully

For J.K. Cement Works, Muddapur (Karnataka)

(Unit: J.K. Cement Ltd.)

Mma Shankar Choudhary

(Unit Head) Enc: as above

1. The Environmental Officer, Karnataka State Pollution Control Board, Sector No. 07, bypass road, Navanagar, Bagalkot-587 102

2. Additional Principal Chief Conservator of Forests (C), Ministry of Environment & Forest, Govt. of India, Regional office (Southern zone), Kendra Sedan, IVth Floor, E & F Wings, 17th Main Road, Il Block, Koramangala, Bengaluru, Karnataka -560 034.

3. Scientist 'D' & In charge, Central Pollution Control Board, 1st & 2nd Floors, Nisarga Bhavan, A-Block, Thimmaiah, Main Road, 7thD Cross, Shivanagar, Opp. Pushpanjali Theatre, Bengaluru, Karnataka 560 079

Corporate Office

• Prism Tower 5th Floor, Ninaniya Estate Gwal Pahari, Gurugram - 122102, Haryana, INDIA

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JK CEMENT ValiMax

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











# ENVIRONMENTAL AUDIT STATEMENT [FORM-V]



#### for

## Integrated Cement Plant of JK Cement Ltd, Muddapur

Clinker :2.2 MTPA

Cement: 3.5 MTPA (OPC, Blended & PSC)

and

Captive Power Plant-50 MW (2\*25)

FOR THE
FINANCIAL YEAR
2022-2023

by



# M/s. JK Cement Works, Muddapur

Unit: JK Cement Ltd.

Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-587122





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#### FORM - V

(See Rule 14) of Environment (Protection) Rules, 1986)

### Environmental Statement for the Financial Year ending the 31st March 2023

#### PART – A

(i)	Name and address of the owner /occupier of the industry operation or process.	•	Mr. Umashankar Choudhary (Unit Head) J.K. Cement Works (Unit: J. K. Cement Limited) Village- Muddapur, Taluka- Mudhol, District-Bagalkot (Karnataka)- 587122 India	
(ii)	Industry category Primary (STC Code) Secondary (SIC Code)		Large- Red (17 Cat) Cement	
(iii)	Production Capacity	:	Clinker -: 2.2 Million Tons Per Annum (MTPA)  OPC & -: 3.5 Million Tons Per Annum (MTPA)  Cement, Slag Cement  Captive -: 2X25 MWH (50MWH)  Power Plant	
(iv)	Year of Establishment	•	2009	
(v)	Date of Last Environmental Statement submitted	:	05.09.2022	





#### PART - B

#### Water and Raw Material Consumption

#### (i) Water Consumption:

Description	During the Previous Financial Year (2021-22)		During the Current Financi Year (2022-23)	
a) Process & Cooling	Cement Plant -120671.14 KL		Cement	Plant -193834.01 KL
	CPP	- 83551 KL	CPP	- 14279 KL
b) Domestic	39135 KL			49382 KL

	Process Water Consumption per unit of Product Output				
	During the	During the	During the	During the	
Name of the	Previous	Previous	Current	Current	
Product	Financial Year	Financial	Financial	Financial	
	(2021-22)	Year	Year	Year (2022-23)	
		(2021-22)	(2022-23)		
Cement (OPC,	0.0507 m <sup>3</sup> /MT of	0.062 m <sup>3</sup> /MT	0.0684 m <sup>3</sup> /MT	0.0978 m <sup>3</sup> /MT	
PPC, Slag and	cement	of Clinker	of cement	of Clinker	
Cement Based					
Adhesive) (m3/MT)					

#### (ii) Raw Material Consumption

#### a. Cement Plant:

Name of the Raw Material		Name of the Product	Consumption of Raw Material (metric to per unit (metric ton) of Output		
			During the Previous Financial Year (2021-2022)	During the Current Financial Year (2022-2023)	
1	Limestone		1.04	0.988	
2	Additives.		0.0095	0.057	
3	Coal/Pet coke (Cement Plant)	Cement (OPC,	0.058	0.054	
4	AFR	Blended	0.065	0.053	
5	Gypsum	cement,	0.069	0.092	
6	Fly ash	PSC)	0.324	0.347	
7	Slag (for PSC)		0.675	0.678	
8	Slag (for OPC)		0.049	0.049	





#### b. Power Plant

		Name of the	Consumption of Raw Material (metric ton) per MW of Output		
Material Product		During the Previous Financial Year (2021-22)  During the Current Financial Year (2022-23)			
1	Coal (CPP)	Power	0.000953	NIL	

<sup>\*\*</sup> CPP not in operation since November-2021.

#### c. Total Cement & Clinker production (MT):

During the Previou (2021		During the Current Financial Year (2022-23)		
Clinker	1944166	Clinker	1980407	
OPC	878832	OPC	919960	
Blended cement	1352760	Blended cement/PPC	1,840,468	
PSC	147762	PSC	72931	

#### d. Total Cement Based Adhesive (Tile fixer) production (MT):

During the Previous Financial Year	During the Current Financial Year
(2021-22)	(2022-23)
0.0	411

# e. <u>Total Power consumption in Captive Power Plant (KWH/ KWH of power production):</u>

During the Previous Financial Year	During the Current Financial Year
(2021-22)	(2022-23)
7.98 %	NIL

<sup>\*\*</sup> CPP not in operation since November-2021.





### PART-C

Pollution Discharged to Environment / Unit of output (Parameter as specified in the Consent issued)

#### a. Cement Plant:

Water			
Pollutant	Concentrations of Pollutants in Discharges (Mass/volume) mg/litre	Standards in mg/liter	Percentage of variation from prescribed standards with reasons
pH Value	8.2	6.5 to 9.0	-9% deviation from standard
BOD	6.2	10	-38% deviation from standard
COD	19.5	50	-61% deviation from standard
TSS	12	20	-40% deviation from standard
Ammonical Nitrogen as			-66% deviation from standard
NH <sub>4</sub>	1.7	5	
Total Nitrogen	4.5	10	-55% deviation from standard
Fecal coliform	Nil	<100	Within prescribed limits

Stack gas Quality					
Pollutant	Avg. Concentrations of Pollutants in Discharges (Mass/volume) mg/Nm³	Standards in mg/Nm³	Percentage of variation from prescribed standards with reasons		
Kiln stack					
PM	14	30	-55% deviation from standard		
SO <sub>2</sub>	0	100	Within prescribed limits		
NO <sub>x</sub>	453.8	800	-43% deviation from standard		
Coal Mill stack					
PM	14.3	30	-52% deviation from standard		
Cement Mill stack					
Cement Mill-1 PM	8.8	30	-71% deviation from standard		
Cement Mill-2 PM	15	30	-50% deviation from standard		
Cement Mill-3 PM	13.6	30	-55% deviation from standard		
Cooler stack					
PM	10.9	30	-64% deviation from standard		





Ambient Air Q	Ambient Air Quality				
Pollutant	Concentrations of Pollutants in Discharges (Mass/volume) µg/m³	Annual Avg in µg/m³	Percentage of variation from prescribed standards with reasons		
Core zone- Ple	ant				
Near Administ	tration Building				
PM <sub>10</sub>	58.5	60	-3% deviation from standard		
PM <sub>2.5</sub>	23.5	40	-41% deviation from standard		
SO <sub>2</sub>	7.7	50	-85% deviation from standard		
NO <sub>x</sub>	17.9	40	-44% deviation from standard		
Colony Guest	House				
PM <sub>10</sub>	56.6	60	-6% deviation from standard		
PM <sub>2.5</sub>	25.4	40	-37% deviation from standard		
SO <sub>2</sub>	7.6	50	-85% deviation from standard		
NO <sub>x</sub>	16.7	40	-58% deviation from standard		
Bommanbudhini					
PM <sub>10</sub>	53.2	60	-11% deviation from standard		
PM <sub>2.5</sub>	23.4	40	-42% deviation from standard		
SO <sub>2</sub>	7.5	50	-85% deviation from standard		
NO <sub>x</sub>	15.6	40	-61% deviation from standard		
Muddapur Village					
PM 10	55.5	60	-8% deviation from standard		
PM <sub>2.5</sub>	25.1	40	-37% deviation from standard		
SO <sub>2</sub>	7.1	50	-86% deviation from standard		
NO <sub>x</sub>	17.3	40	-57% deviation from standard		

#### **B.Power Plant:**

Pollutants	Concentrations of Pollutants in Discharges (Mass/volume) mg/litre Except pH	Standards in mg/litre	Percentage of variation from prescribed standards with reasons
(a) Water			
рН	-	5.5 to 9.0	
Suspended Solids	-	100	
Oil & Grease	-	10	
Temperature	-	Not more than 5°C higher than	





Pollutants	Concentrations of Pollutants in Discharges (Mass/volume) mg/litre Except pH	Standards in mg/litre	Percentage of variation from prescribed standards with reasons
		the intake water temperature	CPP is not in operation since Nov-2021.
(b) Air			
PM	-	50	
SO <sub>2</sub>	-	600	
NO <sub>x</sub>	-	450**	

<sup>\*\*</sup>Note: NO<sub>x</sub> Standard as per MoEF & CC notification dated GSR 622 (E)dated 19<sup>th</sup> October 2020





#### <u>PART – D</u> Hazardous Wastes

(Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and amendments thereof)

Hazardous Waste		Total Quantity Generated in KL		
		During the Previous	During the Current	
		Financial Year	Financial Year	
		(2021-22)	(2022-23)	
(a)	From Process	Generated Quantity in	Generated Quantity in	
	Used Oil (Category No	1.355 KL which is used in	2.0 KL	
	5.1)	our cement plant.		
(b)	From Pollution Control	NIL	NIL	
	Facilities			

#### Quantity of e-waste under E-Waste (Management) Rules, 2016-

We have disposed following quantity of e-waste to KSPCB authorized recycler in 2022-23:

S.No	E-Waste Name	E-Waste quantity in stock at the beginning of the year 2022-23	E-Waste quantity generated during the year 2022-23	E-Waste quantity sent to recycler during the year 2022-23	E-Waste quantity in storage at the end of the year 2022-23
1	E-waste	0 kg	1100 kg	1100 kg	0 kg

Note- e-waste disposed to KSPCB authorized recycler of M/S Global tech Recyclers, Bangalore.

Batteries (Management and Handling) Rules, 2001, 2012 and amended 2022 there to We have purchased 44 No's batteries and disposed 48 No's to KSPCB authorized Recyclers in FY 2022-23.

### <u>PART – E</u>

#### Solid Wastes

Solid Waste	Total Quantity in metric tons		
	During the Previous During the Curre		
	Financial Year	Financial Year	
	(2021-22)	(2022-23)	





(a)	From Cement Process:	NIL	NIL
(b)	From Pollution Control Facilities- Generated	Recycled back to Process	Recycled back to Process
(c)	1. Quantity recycled or re-utilized within the unit a. Fly Ash b. Bottom Ash	12740.12 MT 1326.65 MT	NIL NIL
	2. Sold a. Fly Ash b. Bottom Ash	NIL NIL	NIL NIL
	From Captive Thermal Power plant: 3. Disposed a. Fly Ash b. Bottom Ash	12740.12 MT 1326.65 MT	NIL NIL
D	Flyash – Procurement Consumption	448479.07 MT 438431 MT	600065.95 MT 590804.57 MT

#### PART - F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes

Name of the Waste	Quantity	Characteristics	Disposal Practice Adopted
(1) Hazardous	Opening Stock	Waste Oil	Used for lubrication of conveyors,
Waste	(01.04.2022) : NIL	containing	





	Name of the Waste	Quantity	Characteristics	Disposal Practice Adopted
	Used / Spent Oil (Category No.5.1)	Generation (Apr'22 - Mar'23) : NIL Consumption (Apr'22 - Mar'23) : 2.0 KL Closing Stock (31.03.2023) : 0.0 KL	5000-7000 kcal/Kg of GCV	chain blocks and other motors within the Plant.
(2)	Solid Waste Bottom Ash	Opening Stock (01.04.2022) : 3687.85 Generation (Apr'22 - Mar'23) : NIL Consumption (Apr'22 - Mar'23) : NIL Closing Stock (31.03.2023) : 3687.85	Solid containing Sio <sub>2</sub> : 40-42%, Fe <sub>2</sub> O <sub>3</sub> : 4-5 % LOI : <1 % Al <sub>2</sub> O <sub>3</sub> : 18-20%	100% Utilized within the premises (replacemen t of Boiler bed materials, used as sand for masonry works)
(3)	<b>Solid Waste</b> Fly Ash	Opening Stock (01.04.2022) : 1097.24 Generation (Apr'22 - Mar'23) : NIL Consumption (Apr'22 - Mar'23) : 590,804.57 Closing Stock (31.03.2023) : 489.74	Solid containing SiO <sub>2</sub> : 30 %, Fe <sub>2</sub> O <sub>3</sub> : 20% LOI : 5-10 % K <sub>2</sub> O : 1% Na <sub>2</sub> O : 5.7% Al <sub>2</sub> O <sub>3</sub> : 14 %	100 % of Fly Ash Utilized in Cement production.
(4)	Dust collected in ESP, Bag House and Bag Filters	-	-	recycled back into the process.

Note- 590,804.57 Metric ton of Fly Ash has been used from difference sources as our CPP is not in operation since 02.11.2021. The main source of Flyash is NTPC Kurki and JSW.

#### PART - G

# Impact of the Pollution Abatement Measures Taken on Conservation of Natural Resources and on the Cost of Production.

Following measures have been adopted for abatement of pollution, conservation of natural resources: -

★ Air cooled condensers have been installed to reduce water consumption at Captive Power Plant.





- ★ Stack Emissions were controlled by installation of Pollution control equipment's of ESP's and Baghouses.
- ★ Regular monitoring of Ambient Air Quality, Stack Emissions, Fugitive and Effluent Quality of treated wastewater have been taken up to the evaluate the efficiency of the pollution control systems and necessary control measures have taken-up.
- ★ Roof top rainwater recharge measures and rain water harvesting pits have been constructed for collection and utilization of rain water.
- ★ As our pollution control equipment's are working with higher efficiency, the maximum portion of materials collected in APCD's are recycled and used in process, thus conserving raw material and reducing dust emission.
- ★ Flyash Generated from CPP (not in operation) and procurement from surrounding Power Plants are being used in the manufacturing of PPC, thus utilizing waste and conserving limestone.
- ★ Utilization of low-grade limestone from mine is used for cement manufacturing process and thereby conserving the mineral and increasing the mine life.
- ★ Treated effluent from CPP & Domestic sewage from residential colony to confirm the prescribing standards and then using to greenbelt development, dust suppression and ash quenching. Thus, the same amount of fresh is being conserved.
- ★ Various types of AFR (Hazardous and non-hazardous) wastes from nearby ULB's and other industries as alternate fuel in kiln which helps in conserving fossil fuel i.e., Coal.
- ★ Various Energy Projects have been taken up to conserve energy are follows.

S.No.	Energy efficiency improvement measures (EEIM)	Energy Saving	CO2 saving
		(KWH)-Ajay	(Kg)





1	Raw Mill specific Power reduction (Mill specific power	2684835	2282110
2	got reduced from 12.72 to 12.45 kwh/mat).  Conversion of hopper building bag filter fan from DOL to VFD. (Slag Mill).	26000	22100
3	Replacement of Standard Efficiency motor (IE1) to Super Premium Efficiency (IE4) (Cooler Fan K41 was running with standard efficiency motor (IE01) - Rating 300 KW).	37498.00	31873
4	MCC P & V Blower running on temperature feedback. (Cooler area).	34560	29376
5	Conversion of MCC P & V Blower from DOL to VFD. (Baghouse MCC).	46800	39780
6	Shifting of Screw Compressor from CPP to Cement Mill & optimization in Compressor power house power consumption (Cement Mill).	1656000.0	1407600
7	MCC Cooling system running with Split AC (Crusher area).	27156.0	23083
8	MCC P & V Blower running based on temperature sensor (HTDB 4).	39900.0	33915
9	Replacement of Standard Efficiency motor (IE1) to Super Premium Efficiency (IE4) (CM 03 Feed belt 515BC600).	7560	6426
10	Optimization in Cement Silo Bag filter fan operation (Cement Silo).	90657	77058
11	Cement Mill 03 Feed increased in GRR mode.	756000	642600
12	Replacement of Standard Efficiency motor (IE1) to Premium Efficiency (IE3) (Coal Mill).	3600	3060
13	Replacement of Standard Efficiency motor (IE1) to Premium Efficiency (IE3) (Coal Mill) De rating of motor from 16 Kw to 18 Kw (Bag filter fan 465FN292).	10800	9180
14	Installation of Split AC. P & V system stopped (Cooler Hydraulic room).	27156	23083
15	Rectification of recirculation damper operating positions (Coal Mill) (461TV410)	120000	102000
16	Lime Crusher Bag Filter Fan speed optimization.	18000	15300
17	Optimization in Raw Mill Fan speed (SPRS ).	30857	26228
18	Energy Saving in Coal Mill Hopper feeding (Optimization done in Bin range level).	28080	23868
19	Fly Ash Circuit - Conversion of Motor Delta connection to Star.	21600	18360





	1		I
20	Optimization in Packing Plant - 624FN110 stopped by using 50 % air of BL230 for diverting air slide from PP3 to PP4.	10403	8843
22	Increase in productivity of Cement Mill-03 (Reduction in nozzle ring area for increases of velocity)	1181818.40	1004546
23	Weigh feeder rpm locked to avoid mill stoppage (LS Crusher).	27500	23375
24	AFR - Conversion of Motor Delta connection to Star.	21600	18360
25	CM 02 GRR Cooling Fan Optimization.	3285	2792
26	Optimization in Compressor Power (CM 02 Bag Filter)	300000	255000
27	Optimization in Packing Plant - Bag Filter Fan speed	7140	6069
28	Optimization in Packing Plant - To avoid idle running of Bag Filter Fan.	10512	8935
29	Slag mill bag house fan tipping.	2363636.8	2009091
30	Replacement of screw conveyor with RAL.	13200	11220
31	CM 02 - Inhouse Interlock modification of Cooling water circuit.	7515	6388
32	Coal Mill Productivity improvement - Booster fan motor increased from 37kwh to 90 KWH and rpm increased from 750 to 1500 rpm.	44660	37961
33	Slag Mill - Replacement of Spray water pump motors (7.5 to 5.5 KW).	4020	3417
34	Optimization of silo feed elevator load (CM 03 Bag house).	168831.2	143507
35	Removal of Coal Mill Coal Reject Bucket elevator.	14400	12240
36	AFR - Replaced the motor from 15kW to 11kW with high efficiency (IE3).	8500	7225
37	Replacement of Standard Efficiency motor (IE1) to Premium Efficiency (IE3) - Cement Mill 01.	2441 2075	
38	Enhancement of LS crusher productivity.	364982	310235
39	Optimization of CM-3 in OPC grinding at 272 TPH	1080368	918313
	Total Energy saving	12261871	10422591





Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution.

#### Investment Proposal for Environmental Production for the year 2022-23

 Repair of damaged roads and new CC roads were constructed to reduce fugitive emissions near cement mill, Fly ash silo area, AFR shed to raw material gate.









New AFR shed flooring.

CC Road towards CPP Area

2. Fugitive dust emission control measures are in place such as deployment of road sweeping machines, closed material conveying system, raw material JK Cement Ltd, Muddapur works, KA

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and finished products are stored in closed sheds and silos, all the material transfer points & silo tops are provided with bag filter, pneumatic handling of flyash and water spraying on the material yards and roads.



AFR Storage sheds



Closed conveying system



New CC Road towards CM area



CC Road in Cement Mills area









Dust Sweeping Machine



Dust Sweeping Machine



Gypsum Storage Shed



Mobile water sprinkler



Colony STP



Neutralization Pit





3. Adequate funds are earmarked for environmental management activities. Capital and recurring expenditure incurred for the same for the period FY2022-23 is tabulated as under.

S.No	Description of the Expenditure	Amount incurred in Lakhs
1	Air Pollution Control in Kiln, Cooler, cement mill, coal mill, and LS crusher (main equipment) including stacks, Bag filters along with ventilation system for the control of fugitive dust emissions from the plant including stacks/ Cost of equipment for controlling emission like bag house, ESP, Bag filter etc., Operational cost/electricity cost, Operation & Maintenance cost.	1146.51
2	Fly ash Silo's and ash handling systems.	57.53
3	Emission Monitoring equipment (including online emission monitoring equipment (CEMS) at sources and ambient air quality in the vicinity) and laboratory.	20.89
4	Green Belt Development, Sewage Treatment plant and Water Harvesting Schemes for plant.	45.08
5	Extra expenditure on green purchase (Purchase of green fuel, recycled materials or any other such purchase (AFR purchase, Fly ash and Slag purchase) to reduce environmental footprint.	4185.03
6	Other environmental management costs (AFR system operation, odour control, environmental training/Award, SNCR system CPP, Environmental License Fees).	762.38
	TOTAL (Rs in Lakhs)	6217.43

#### Additional Measures Proposed for Environmental Protection:

1. Proposal for new CC Road from Slag shed to Pond as shed is under progress. This helps to reduce fugitive emissions.





- 2. We have constructed rainwater harvesting structures inside Plant & colony premises.
- 3. Increase in usage of Alternative Fuels and Raw Material (AFR).
- 4. Increase in manufacturing of PPC grade cement.
- 5. Conducting various awareness campaigns on Environmental & Sustainability aspects.

#### PART - I

#### Any other particulars for improving the quality of the environment.

- a. Green Belt development has been taken up in phased manner, during the FY 2022-23, we have planted 14388 no's saplings in Plant and colony, as an act of densification to the existing plantation area. The total plantation covered from inception of plant to 31st March 2023 in plant and colony is 170745 no's covering an area of 119 Acres @ 46.03% of total land area (258.37 Acre).
- b. Further we have planned for plantation of 5000 no's Saplings in the Year 23-24.





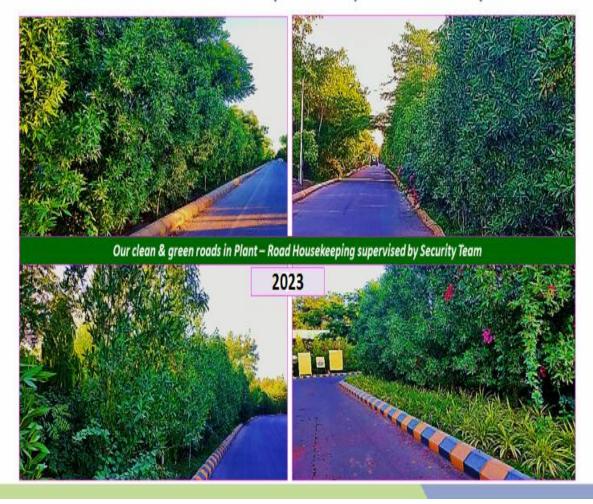






#### Glimpses of Plantation at Plant & Colony

#### Plant Roads Barricaded With Greenery maintained by Horticulture & Security Teams



- c. No discharge of effluent to surrounding areas and wastewater generated is treated and reused in Cement Plant for development of Green Belt.
- d. Integrated Management Systems have been Implemented ISO 9001, ISO 14001, OSHAS 45001 & 50001.
- e. Full-fledged Environmental Cell to carryout Environmental monitoring of stack Emissions, Ambient Air, Noise and Fugitive dust emissions &, compliance tracking software of Lex care, Green Belt development, operation and maintenance of CAAQMS & CEMS and STP Operations.
- f. We have full-fledged AFR laboratory for testing of fingerprint analysis.
- g. Environmental Awareness:





**World Environment Day 5<sup>th</sup> June 2023** is the biggest international day for the environment, led by the United Nations Environment Programme (UNEP), and held annually since 1972, it has grown to be the largest global platform for environmental outreach. It is celebrated by millions of people across the world. World Environment Day 2023 is hosted by Côte d'Ivoire.

JKCW, Muddapur has conducted World Environment Week from 5<sup>th</sup> to 10<sup>th</sup> June, with a theme "**Beat Plastic Pollution**" is the campaign slogan, with the focus on "Solution for Plastic Pollution" as declared by UNEP, various events like **Mission Life Oath**, plantation drives and awareness programs have been conducted across organization to create awareness, glimpses of the event are follows.

# 



World Environment day has started with Mission Life Oath













World Environment Day Plantation at Plant along with Mission Life Oath, Plantation has been arried out by Miyawaki technique and same time drip irrigation system has been installed.





World Environment Day Awareness Programme at Govt College Bagalkot









#### WED Plantation and Mission Life Awareness programme in Muddapur Mine





WED Plantation and Mission Life Awareness programme in Halki Mine, involving the Govt School's students.





WED Plantation and Mission Life Oath with Employees family and children of Sir Padam Pat school - JK Cement Muddapur.









Environment Dept. has taken awareness program on World Environment Day-2022 and awareness speech on Effects of plastics on Environment to children of Sir Padam Pat school - JK Cement Muddapur.

<u>Mission Life:</u> JKCW, Muddapur has issued a circular on "Ban of Single Use Plastics" in Plant and Colony premises. We have conducted awareness programs on ban of single use plastics to colony residents, workers and "No to single use plastic"







JKCW, Muddapur has celebrated World Environment Week Programme along with Mission Life Awareness and Oath, during World Environment Week Programme along with Mission Life, JK Cement Muddapur has conducted various programme in Halki Mine, Muddapur Mine, Colony residential area and Govt College Bagalkot regarding WED and Mission Life Awareness and Oath.

#### Display Boards at Plant & colony Awareness drives on premises

