Environmental Audit Report

Environmental Audit conducted at …

K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori
Tal. Niphad, District - Nashik

- Dr. R K Datir and Team

Environmental Audit conducted by …

ENSUS Consultancy Services – Nashik

- Mr. Sameer Vaze and Team

PO Reference –		
SR	Description	Dates
1	Site Visit Audit Dates	February 20, 2021
2	Field Trial Dates	NAP
3	Date of 0th Version Audit Report	February 25, 2021
4	Audit Report Review Meeting Date	
5		
6		

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1. Acknowledgement

ENSUS Consultancy Services, Nashik is thankful to the Management of **K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori** for giving an opportunity to conduct Environment Audit at their premises.

We appreciate and extended our sincere thanks to following authorities of **K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori** for making all the Data, Facilities and personal support available during the Environment Audit Activity.

- Dr. R K Datir, Principal
- Dr. S G Sawant, Vice Principal
- Prof. P P Aher, Vice Principal
- Dr. H T Waghmare, NAAC Coordinator
- Prof. A B Janjale, IQAC Coordinator
- Dr. N S Jadhav, Criteria 7 Coordinator
- Prf. P S Kadam, Criteria 7 Member
- Prof. Kolhe B B, Physical Director
- Shri. Ramdas Bute, Electrician

We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

During the audit, every attempt was made to understand the operational features and the actual working in the right perspective.

All analysis is based on the actual data collected, observations on site and data submitted by the Management.

2. Abbreviations

Abbreviations
NAP – Not Applicable
NAS – Not Ascertained
NAV – Not Available

3. Disclaimer

Environmental Audit Team of ENSUS Consultancy Services has prepared this report for **K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori** based on input data submitted by the representatives of college complemented with the best judgment capacity of the expert team.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

If College wishes to distribute copies of this report external to your organisation, then all pages must be included.

4. Environmental Audit Conduction Team

Audit Coordinated by …				
1	Dr. R K Datir	Principal	9420692111	Principal-seniorchandori@kkwagh.edu.in
2	Dr. S G Sawant	Vice Principal	9673090296	
3	Prof. P P Aher	Vice Principal	8698514894	
4	Dr. H T Waghmare	NAAC Coordinator	8421267599	
5	Prof. A B Janjale	IQAC Coordinator	9763745306	
6	Dr. N S Jadhav	Criteria 7 Coordinator	9730593787	
7	Prf. P S Kadam	Criteria 7 Member	7057035401	
8	Prof. Kolhe B B	Physical Director	9423115687	
9	Shri. Ramdas Bute	Electrician	9822916874	

Audit Conducted by …				
1	Mr. Sameer Vaze	CEA - 7461	9850992234	ensus.services@gmail.com
2	Mr. Harish Kathaley	CEA - 3014	9823087228	harishkathaley@gmail.com

5. Green, Environmental and Energy Audit Concept

The term GREEN means eco-friendly or not damaging the environment. Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity.

Sometimes, **Green Audit**, is known by the name **Environmental Audit**. It aims to analyse environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience.

It was initiated with the motive of inspecting the work conducted within the organizations whose activities can cause risk to the health of inhabitants and the environment. Through Green / Environment Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit.

In today's scenario, no activity can be done without the usage of Energy. Primarily Fossil Fuels like Coal, Oil and Gas further in the form of Electrical Energy as a Secondary Source. Unnecessary, Un-effective and less Efficient usage of Energy results into damaging effect on Environment and reduces the sustainability of Energy Resources found in nature. Hence **Energy Audit** is also very important aspect of Green or Environment Audit.

For simplicity, we have categorised various aspects of these Audits as mentioned below …

SR	Heading	Audit Category
1	Greening the Campus	**Green Audit**
2	Water	**Green Audit**
3	General	**Green / Environment Audit**
4	Waste minimizing	**Environment Audit**
5	Clean Air and Sound Levels	**Environment Audit**
6	Animal Welfare	**Environment Audit**
7	Environmental Legislative Compliance	**Environment Audit**
8	Energy	**Energy Audit**

6. Objective and Scope

- Systematic Green, Environmental and Energy Consumption Assessment
- Listing of environmental protection initiatives and improvement therein
- Sustainable use of natural resource in the campus
- Financial savings through a reduction in resource use
- Development of ownership, personal and social responsibility
- Enhancement of College profile
- Developing an environmental ethic and value systems in young people

7. Overview of Parent Society and College

Parent Society

The K. K. Wagh Education Society started in the Year 1970; a small sapling planted started with only one institute has now spread its wings with 35 different institutes and has become the brand name in the field of education.

The courses like Engineering, Polytechnic, Traditional branches like Arts, Commerce, Science & Computer Science, Education, Nursing and Agricultural studies are offered and being chosen by high-ranking students.

Many of their past students are holding prestigious positions in the reputed organisations within the country and aboard. The K. K. Wagh Education Society is known for the moral values, ethics & contributing a lot for the overall upliftment of the society.

A Small sapling planted by Karmaveer Kakasaheb Wagh has grown in to a full tree with 35 different branches with 21,000 students engaged in studies from K.G to Ph.D. in various fields. there are over 1900 dedicated employees who have been engaged in maintaining quality education.

Vision
Empowering students from rural areas through quality education and to imbibe human values in them.

Mission
To educate youth through quality education for holistic development by imparting value based and skill-based education to transform students into competent responsible citizen.

K. K. Wagh Arts, Commerce, Science & Computer Science College – Chandori

K. K. Wagh Arts, Commerce, Science & Computer Science College – Chandori

The college was established in the year 2004, this institute is started in rural area & the 16-year journey has been a story of hard work, sincere effort toward quality enhancement, quantitative growth & expansion.

During this short span the number of students has increased considerably & characteristically almost 70% of the students have been girl students. Visa-vis there's been growth in infrastructure - a large campus with Gymkhana, Smart Classroom, a large Playground, Computer Lab, well equipped Departments, Language Lab, Commerce Lab and Psychology Lab and experienced qualified faculty.

Courses offered by college …

SR	Course Name	Intake Capacity
1	Bachelor of Arts	120
2	Bachelor of Business Administration (Computer Application)	80
3	Bachelor of Commerce	120
4	Master of Commerce	60
5	Bachelor of Science	120
6	Bachelor of Computer Science	80
7	Master of Computer Science	30

Students Classification

SR	Category	Male	Female	Total	%Male	%Female
1	SC	34	20	54	62.96	37.04
2	ST	25	23	48	52.08	47.92
3	DT/NT	26	20	46	56.52	43.48
5	OBC	158	137	295	53.56	46.44
6	Open	158	149	307	51.47	48.53
	Total	401	349	750	53.47	46.53

Faculty Classification

Category	SR	Year	Male	Female	Total	% Male	% Female
Teaching Faculty	1	2016-17	12	18	30	40	60
Teaching Faculty	2	2017-18	15	23	38	39.5	60.5
Teaching Faculty	3	2018-19	15	21	36	41.7	58.3
Teaching Faculty	4	2019-20	14	25	39	35.9	64.1
Teaching Faculty	5	2020-21	14	25	39	35.9	64.1

Staff Classification

Category	SR	Year	Male	Female	Total	% Male	% Female
Non Teaching Faculty	1	2016-17	9	3	12	75	25
Non Teaching Faculty	2	2017-18	12	2	14	85.7	14.3
Non Teaching Faculty	3	2018-19	10	2	12	83.3	16.7
Non Teaching Faculty	4	2019-20	12	4	16	75	25
Non Teaching Faculty	5	2020-21	11	4	15	73.3	26.7

College Photos -

College Building – Side View

College Building – Veranda View

College Photos -

Class Room – Smart Class Room with all Gadgets
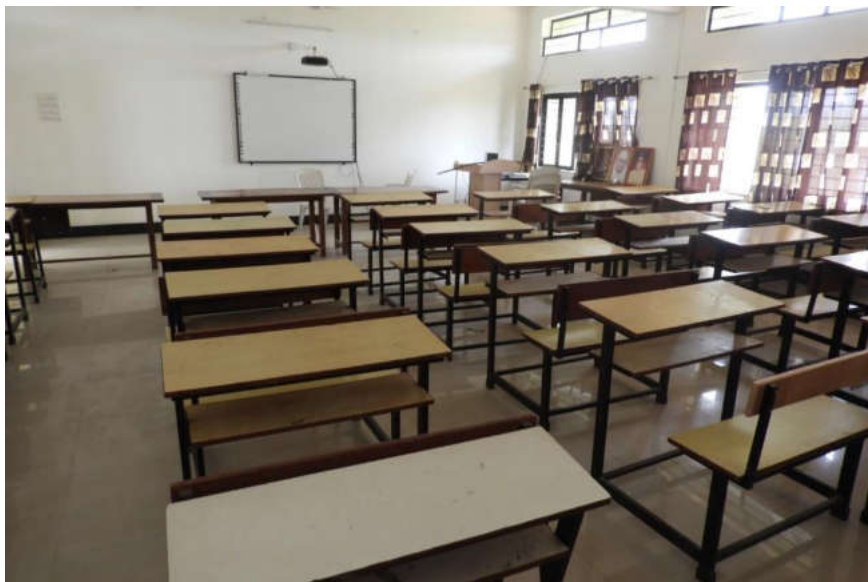
Class Room – with Natural Light

College Photos -

Computer Lab

Science Lab

College Photos -

Chemistry Lab

Electrical Lab

College Photos -

Language Lab

Office

College Photos -

Battery Room with Exhaust Facility

Fire Safety System

College Photos -

Library

Reading Room

College Photos -

Canteen
Gymkhana

College Photos -

Playground

Basket Ball Court

College Photos -

Solar Cell – 20 kW

Solar Cell Control

8. Executive Summary of Environment Audit

Fields covered in Environment Audit

SR	Heading	Audit Category
4	Waste minimizing	**Environmental Audit**
5	Clean Air and Sound Levels	**Environmental Audit**
6	Animal Welfare	**Environmental Audit**
7	Environmental Legislative Compliance (ELC)	**Environmental Audit**

Recommendations for Waste Management	
1	Plan for ZERO Garbage Status
2	Recycle the Waste Water and use it for Gardening
3	Use Paper Shredding Machine

Recommendations for Clean Air and Sound Level	
1	Get Window/ Floor Area Ratio
2	Monitor the Air Quality once in Year
3	Monitor the Sound Level once in a Year

Recommendations for Animal Welfare	
1	Monitor the Birds in the Campus
2	make provision of Food, Water and Shelter to Birds

Recommendations for Environmental Legislative Compliance (ELC)	
1	Get the knowledge of Environmental Laws
2	Monitor Air Quality
3	Monitor Water Quality
4	Conduct Environment Protection Drives
5	Implement 5S Techniques

9. Waste Minimizing

4. Waste Minimizing		
4.1	List out the waste that your institute generate. (approximately)	Solid waste, Canteen waste, paper waste, plastic waste, toiletry waste, Horticulture Waste, etc …
4.2	What is the approximate amount of waste generated in kg per Month? (approximately)	**Bio Degradable** / **Non Biodegradable** / **Hazardous** / **Others** 5 kg/month / 5 kg/month / Nil / 5 kg/month
4.3	How is the waste generated in the institute managed? By… 1. Reuse 2. Recycle 3. Composting 4. Handover to Public Waste Management Service	No. of Composting Pits in the Campus -1 Reuse of one side printed Paper for internal communication. Sewage water is discharged to public Sewer. Domestic Waste is given to Municipal Corporation. Waste Bin Types - Bio degradable & No Non Bio degrdabale Horticulture waste is also given to Municipal corporation
4.4	Do you use recycled paper in Institute?	Yes, in academic evaluation works
4.5	Do you use reused papers in Institute?	Yes
4.6	How you made the community aware about Waste reuse and recycling.	Yes, Green Society carried out numerous activities. Recycling campaigns, e waste management, Antiplastic campaigns, Varsha Vriksharopan, Sustainable growth and goal awareness programme.
4.7	How you have planned to achieve Zero Garbage in your Institute?	Not yet
4.8	How e-waste is handeled by Institute	Sent to Central Office for further processing
4.9	Does Institute has Sewage Treatment Plant	No
4.10	Does Institute has Efflient Treatment Plant	No

Solid waste management

The college has a sprawling green campus. It has given top priority to keep the campus clean and eco-friendly. The faculties and students are regularly advised to reduce waste. The students put waste in separate bins kept at different places in the college campus.

The Red & Green coloured dustbins are placed separately for degradable and non-degradable waste at every corner of the corridor, wash rooms and common room. The dry dustbins are also placed in laboratories, library, classrooms, etc. Old newspapers, used papers and journal files, workshop scrap etc. are given for recycling to external agencies.

The solid waste is regularly collected by Chandori Gram Panchayat.

The plant materials such as grass and dry leaves are used for vermin compost plant. The solid waste is segregated as dry & wet as well as easily disposable & non disposable. The boards with meaningful slogans are displayed to create environmental consciousness among the students as well as stakeholders. The vending & burning machine has been installed in the ladies' room to ensure cleanliness.

The NSS volunteers regularly conduct cleanliness campaign in the campus and contribute to keep campus neat and clean. The students from Earn and Learn Scheme are also assigned the responsibility of collecting litter. A gardener and lady workers are appointed by the College. The College sees to it that no environmental hazards are created in the campus.

Liquid waste management:

There is a drainage system to manage the liquid waste of the college. All waste water lines from toilets, bathrooms etc. are connected with Municipal drainage.

Preferentially diluted solutions are used for experimental purpose. Concentrated solutions are thrown in sink only after dilution.

After treatment (steam sterilization or using chemical disinfectants) liquid wastes are disposed of in the diluted forms through the drainage system.

Biomedical waste management

Department of Botany uses Semi micro level-based method to avoid contamination of Chemical waste that are produced during practical work. The Plant raw material or unused waste material are taken in Biodegradable waste dustbin and further it is dumped in soil.

- The Broken glassware are disposed in separate dustbin labelled as Breakage (Glassware).

- Chemical waste that are generated during Practicals are initially diluted with water and thrown in Chemical Waste Dustbin.

- Biodegradable Waste: Plant parts such as Roots, Stem, Leaves, flowers, fruits etc.

- Breakage (Glassware): Glassware such as Pipettes, Petri dish, Cover slip, Glass slide, Beaker etc.

- Chemical Waste: Staining Dyes such as Saffrine, Methylene Blue, Acetocarmine stain, Methyl Orange etc. and chemical such as acetone, sugar solution, sodium arbonate etc.

E-waste Management:
The parent institute has provided a mechanism for E-waste management. The committee members of this mechanism decide the E–waste material i. e. laboratory equipment's, computers, monitors, printers etc. As per their advice, the college dispatches the same to the store of K.K. Wagh Education Society, Nashik for disposal.

Hazardous chemicals and radioactive waste management:
There is a mechanism to dispose the hazardous chemicals of the Chemistry laboratory

Waste Management Photos

Dry and Wet Dustbins

Vending and Burning Machine

Waste Management Photos

Other Dustbins

Garbage Collection by Chandori Gram Panchayat

Waste Management Photos

Chemical Waste Dumping Pit

Hazardous Chemical Disposal

Waste Management Photos

Vermin Compost Set Up

Chandori, Maharashtra, India
Chandori Rd, Chandori, Maharashtra 422201, India
Lat N 20° 1' 28.4511"
Long E 73° 59' 55.6741"
01/09/20 10:38 AM

10. Clean Air and Sound Level

5. Clean Air and Sound Levels					
5.1	Are the rooms in Capmus are properly naturally ventilated?	Yes			
5.2	Window Area / Floor Area Ratio	Not Available			
5.3	Details of School owned Vehicles	**Buses & Vans**	**Cars**	**Others**	**Total**
	Petrol	0	0	0	0
	Diesel	0	0	0	0
	LPG	0	0	0	0
	CNG	0	0	0	0
	Bio Fuel	0	0	0	0
	Electric	0	0	0	0
	Hybrid	0	0	0	0
	No. of Vehicles more than 5 Years	0	0	0	0
	No. of Vehicles more than 15 Years	0	0	0	0
	No. of Vehicles for which PUC is done as on 31st March 2021				
5.4	Are Vehicles without PUC allowed in the Campus?	No			
5.5	Is Air Quality Monitoring Done?	No			
5.6	Do Staff and Students suffer from Respiratory & Eye Problems?	No			
5.7	State the Details of DG Set and its exhaust system	Not Available			
5.8	Are State or National Highways passing nearby?	yes, 100 miters			
5.9	Are these High ways causing Noise Pollution?	No			
5.10	Is Campus Noisy?	No			
5.11	Is Sound Level Measurement done? (Indoor and Outdoor)	No			

11. Animal Welfare

6. Animal Welfare		
6.1	List the Animals and Birds found in your Campus	No Animals and few Birds
6.2	Is any special arrangement is done for their Food and Water?	No
6.3	Are the Dogs in your Campus have undergone Birth Control Program?	No
6.4	Are the Dogs in your Campus have undergone Anti Rabies Program?	No
6.5	Does your Institure has Bio-diversity Program?	No

12. Environmental Legislative Compliance

7. Environment Legislative Compliance		
7.1	Are environmental Laws pertaining to environmental management known?	No
7.2	State Environment Protection Guidelines Institute is follwoing?	Single Use Plastic is banned
		Non PUC Vehicles are banned
		Burning of Waste is banned
		DJ Systems are banned
		Into the Sky Lamps are banned
7.3	Is Environmental Air Quality monitored?	No
7.4	Is Use Water and Waste Water Quality monitored?	No
7.5	Does stack monitoring of DG Set is monitored?	No
7.6	Is Warning Notice / Letter issued by State / Central Government?	No
7.7	Is Hazardous Waste is generated and if yes, how it is disposed?	Yes, See Photo
7.8	Is Bio-medical Waste is generated and if yes, how it is disposed?	Yes, See Photo
7.9	Is periodical environment protection drive conducetd?	No
7.10	Does Management, Students, Faculties, Staff participate in these drives?	NAP
7.11	Does Institute have House Keeping Schedules?	Yes
7.12	Does Institute follows 5 S Techniques?	No

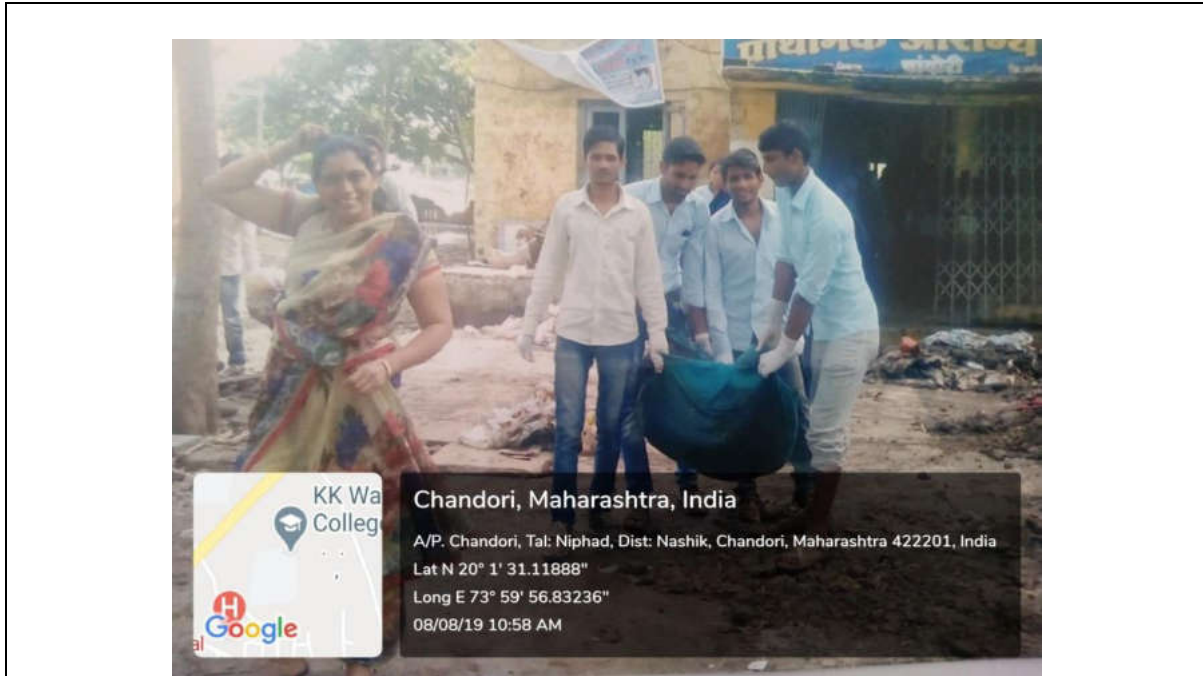**Environmental Activity Photos**

College students cleaning garbage in Chandori village and college premises due to floods in Godavari River in August 2019

College students cleaning garbage in Chandori village and college premises due to floods in Godavari River in August 2019

Environmental Activity Photos

College students cleaning garbage in Chandori village and college premises due to floods in Godavari River in August 2019

College students cleaning garbage in Chandori village and college premises due to floods in Godavari River in August 2019

Environmental Activity Photos

PUC Camp

PUC Camp

END OF REPORT