

D Y Patil Technical Campus

Faculty of Engineering Faculty of Management

Talsande -416 112 Dist: Kolhapur

(Approved by AICTE, New Delhi, Recognized by Government of Maharashtra & Affiliated to Shivaji University, Kolhapur)

Quality audits on environment and energy regularly undertaken by the Institution.

7.1.3 The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit

Report & Certificate is attached.

2. Energy audit

Report & Certificate is attached.





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3. Clean and green campus initiatives

Type of facilities

1. Roof Water collection and recharging ground water table



2. Surface water collected in Water Pond







D Y Patil Technical Campus

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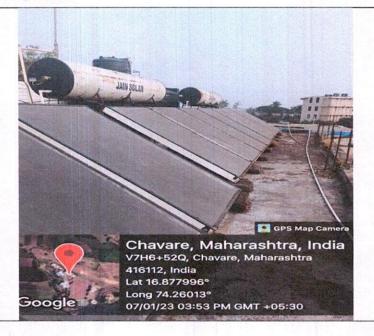
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3. Drip and sprinkler irrigation for plants and garden



4. Solar water Heater at Boys Hostel







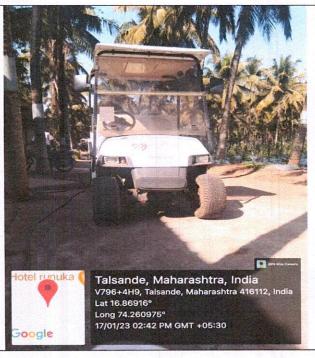
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5. Rechargeable bike and vehicle



6. Waste Bins are placed for Dry and Wet Collection







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7 Vermicomposting from Agricultural Waste



8 Students Project on Waste Management

D Y PAUL TECHNICAL CAMPUS, TALSANDE, DEPARTMENT OF CIVIL ENGINEERING APRIL, 2020



CERTIFICATE

This is to certify that Mr. Dipak Rade, Satyavijay Bhos Auditya Jadhav, Yogosh Kapse, Abhishek Akkiwate, Akshay Patil has satisfactorily Completed the scheduled project work "USE OF PLASTIC IN ROAD CONSTRUCTION" a Noted to them for for fulfillment of curriculum of Shivaji University, Kolhapurin subject of "CIVIL ENGINEERING PROJECT" in Civil Engineering in Year 2019-2020





DIRECTOR





D Y Patil Technical Campus

Faculty of Engineering Faculty of Management

Talsande 416 112 Dist: Kolhapur

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D. Y. Patil Education Society's "D. Y. PATIL TECHNICAL CAMPUS" Faculty of Engineering and Faculty of Management, Talsande



CERTIFICATE

This is certify that, the following students have successfully completed the mitted "USE OF PLASTIC TO PARTIAL REPLACE OF BITUMEN IN CONSTRUCTION OF BITUMINOUS ROAD" in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur during the academic year 2017-2018.

1) Mr. Padule Balaji Shrihari

2) Mr. Patil Avinash Shamrao

1312437308

3) Mr. Ratate Omkar Subhash

1412691225

4) Mr. Halnure Khandeshwar Madhavrao 5) Miss. Jadhav Shital Bhimrao

1412698575

1112355244

Guide

D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING. TALSANDE

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE

This is to certify that group has successfully completed the project entitled "Reuse and Recycle of Construction and Demolition Waste" under my supervision, in the partial fulfillment of Bachelor of Technology in Civil Engineering of Shivaji University, Kolhapur.

MR. JIT SHAMRAO KAMBLE MR. CHETAN CHANDRAKANT MASAL MR. GAURAV SANJAY MAGADUM MR. ROHAN RAVINDRA DABHOLE

Date: 19/07/2022

Prof. S. Jamadagni





D Y Patil Technical Campus

Faculty of Engineering Faculty of Management

Talsande -416 112 Dist: Kolhapur

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9 Students Project on Water conservation

D. Y. Patil Technical Campus , Faculty of Engineering , Talsande .

CERTIFICATE



This is to certify that the discretation report entitled "LOW COST WASTE WATER TREATMENT BY USING AEROBIC FILTERMEDIA" which is being submitted here with for the award of the degree of Bachelor in Civil Engineering of Shivaji University. Kolhapur, is the result of work completed by,

- Mr. CHAVAN SUHAS YASHAVANT (2014009262)
 Mr. BELANEKAR SANJAY BHIKAJI (2015010451)
 Mr. PATIL SUYASH SUDHIR (1212400735)

- 4) Mr. DHAMDHERE ALKESH ANIL (1212400704)

Under our supervision and guidance and the best of our knowledge and belief. The work embodied in this report has not done earlier for the hasis of any degree or similar title of this or any other university or examination body.

PROF, K.S.REDEKAR

GUIDE & COORDINATOR

EXTERNAL EXAMINAR

D. V. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING, TALSANDE

DEPARTMENT OF CIVIL ENGINEERING

DYPATIL

CERTIFICATE

This is to certify that this project group has successfully completed the project entitled "USE OF VERTICAL FLOW AND HORIZONTAL FLOW CONSTRUCTED WETLAND IN SERIES TO TREAT WATER" under my supervision. in the partial fulfilment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur,

MR. ABHISHEK RANGRAO KADAM 4002

MR. PARTH SUBHASH BHANDARE 4053

MR. RAHUL VISHWAS DAWARE 4064 MR. ROHIT SANJAY BHOSALE

MR. AETHISHAM SAJID GADIWAN 4095

MR. VIRKUMAR KIRAN PATIL

H.O.D. Civil department

Dr. S.R. Pawaskar

Director





D Y Patil Technical Campus

Faculty of Engineering Faculty of Management

Talsande -416 112 Dist: Kolhapur

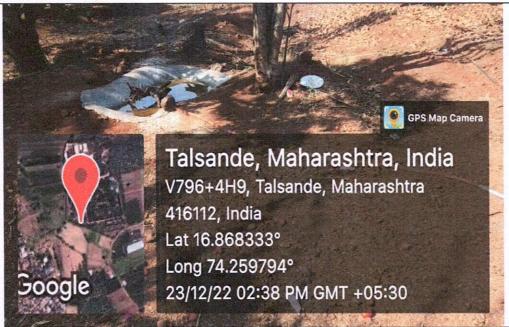
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10. Tree Plantation and maintaining flora and fauna in college campus

Plantation at Parkhandale



12 Small water ponds for birds





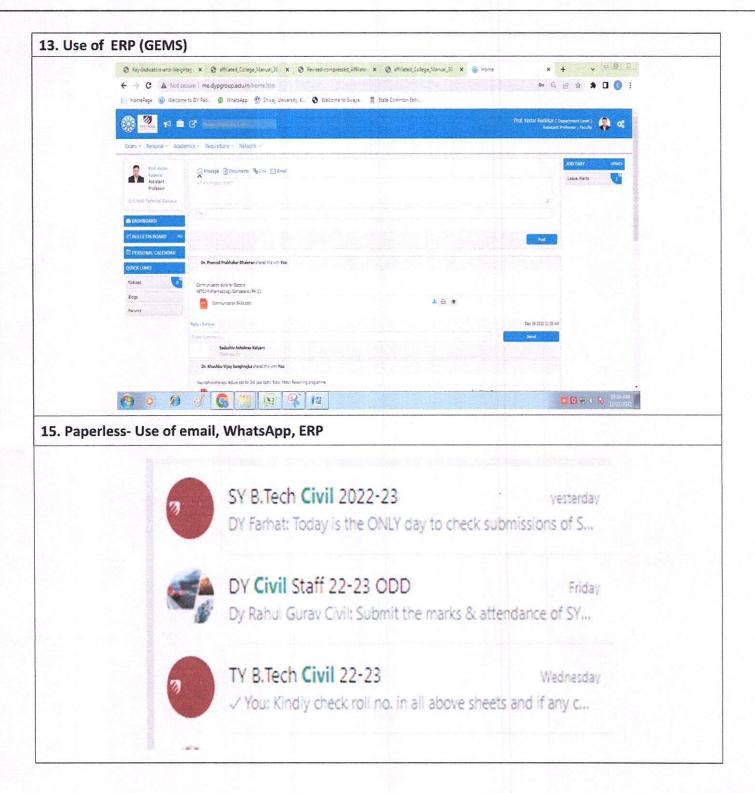


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DYPATIL TECHNICAL CAMPUS FACULTY & ENGINEERING FACULTY & MANAGEMENT FACULTY OF MANAGEMENT FACULTY OF MANAGEMENT FACULTY OF MANAGEMENT FACULTY OF MANAGEMENT D Y Patil Technical Campus

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4. Beyond the campus environmental promotion activities

Type of facilities

- 1. NSS Residential Camp
- 2. Cleaning activity under NSS
- 3. Tree Plantation under NSS
- 4. Awareness Activity under NSS



Green Audit Report, Energy Audit Report, & Environment Audit Report

D.Y. Patil Technical Campus, Faculty of Engineering and Faculty of Management, Talsande, Kolhapur.



Ву,

Nisarga Consultants,

Basavaraj Complex, APMC Road, Sadashiv Nagar, Belagavi - 590001.

> nisargaconsultants@gmail.com www.nisargaconsultants.com



Nisarga Consultants

Environmental and Civil Engineering Professionals www.nisargaconsultants.com

Green Audit Report, Energy Audit Report & Environment Audit Report



D.Y. Patil Technical Campus, Faculty of Engineering and Faculty of Management, Talsande, Kolhapur

NISARGA CONSULTANTS
Basavaraj Complex,
Sadashiv Nagar, APMC Road,
BELAGAVI - 590 001





(An ISO 9001:2015, ISO 14001:2015 Firm)

GREEN, ENERGY AND ENVIRONMENT AUDIT CERTIFICATE

This Certificate is Presented To

D.Y. Patil Technical Campus, Faculty of Engineering and Faculty of Management, Talsande, Kolhapur

Our team of Environmental Engineers has analyzed Green, Energy, and Environment practices followed by the college.

PRADEEP NAGAMALLI

B.E., M.TECH. (ENV. ENGG.)

NISARGA CONSULTANTS

AUDIT YEAR: 2022



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Acknowledgement

We express our gratitude for calling upon us for this audit, mainly Dr. Sanjay D. Patil Chairman, Hon. Shri. Ruturaj Sanjay Patil MLA Kolhapur South & Trustee, Dr. A. K. Gupta Executive Director, Dr. Satish Pawaskar Campus Director, who were the driving force behind this work. We also thank the team members, mainly, Prof. Kedar Shivaji Redekar, HOD, Dept. of Civil Engineering, Prof. S.S. Jamadagni and others, who were ever helpful and supported us with all the inputs needed for this audit. We thank all the teaching, non-teaching and students for helping us in conducting this audit.

Green Audit Team

Mr. Pradeep N. V., M. Tech. (Env. Engg.)
Sr. Environmental Engineer

Mr. Vijay S. Kumbar, M. Tech. (Env. Engg.) Sr. Environmental Engineer

Ms. Yashaswi K., B. E. (Civil Engg.)
Project Associate

Ms. Priyanka H., B.E. (Civil Engg.)
Audit Associate

Mr. Kartik A., B.E., M.B.A.

Audit Executive

Mr. Sadanand M., B. Sc. Draftsman

About the Group of Institutes

Padmashree Dr. D.Y. Patil, Ex-Governor of Bihar has created new realms for the people in India, which is affordable for both education and health facilities. Under his able guidance and leadership, the state of Maharashtra has seen development in the field of education and healthcare. D. Y. Patil Group is a major educational organization having three deemed universities to its credit and running nearly over 160 educational institutions, mainly in the area of professional education.

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Mission

- To produce skilled technical and managerial work force with high ethical values
- To promote use of latest teaching aids to excel in academics and research.
- To install lifelong learning and respect for the environment.

Vision

To become leading technical campus in providing high quality technical and management education equipped with professional ethics and values to serve the society.

Introduction to Green, Energy and Environment Audit

This audit assists in analyzing environmental practices implemented within the educational campuses, which will result in achieving sustainable goals. Green, Energy and Environment audit comprises of systematic identification, quantification, recording, reporting and analysis of elements of environmental conditions in the premises.

Need for Green, Energy and Environment Auditing

Green, energy, environment auditing is the mode in analyzing and determining whether the institutions' day to day activities are environmentally friendly and sustainable for future generations. Primarily, we are good and efficient users of resources available naturally. Subsequently, excess use of energy, water, have become habitual to everyone.

Green, energy and environment audit provides an approach to check whether

- Our processes are consuming more resources than required?
- Whether we are handling resources carefully?

Continuous monitoring of such processes regulates and gives an efficient way of natural resource utilization.

Recent issues such as drastic climatic changes and depletion of non-renewable resource are of greater concern. To combat such issues at institute/college level, it is needed to check the processes and change them into greener and cleaner one. Green audit also increases overall consciousness among the people working in the institution towards a sustainable environment.

Goals of Green, Energy and Environment Audit

Our team has conducted a green audit with specific goals, such as:

- Recognizing and documenting of green practices followed by the institute.
- Note strength and weakness in green practices presently followed.
- Analyze and suggest solution for the drawbacks identified.
- Evaluate facility of different types of waste management.

- Increase environmental awareness throughout campus.
- Inspire staff for optimized sustainable use of available resources.

Objectives of Green, Energy and Environment Audit

- To inspect the current practices, which can impact the environment.
- To recognize and analyze significant environmental issues.
- Establish and implement Environment Management in various departments.
- Continuous evaluation for betterment of performance in this regard.

Benefits of Green, Energy, Environment Audit to Educational Institutions

There are many advantages of green audit to an Educational Institution:

- It would help to protect the environment in and around the campus.
- Empower the organization to frame a better environmental performance.
- It portrays good image of institution through its clean and green campus.

Executive Summary

A Green Campus or an Eco-friendly Campus is a place where environmentally friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. It is a campus which is sustainable because of its resource utilization and minimum waste discharge into the environment. Green, Energy and Environmental Audit is an assessment of the extent to which an organization is observing practices which minimize harm to the environment. It assesses the campus performance in complying with applicable environmental laws and regulations. This audit report comprises of observations and recommendations for improvement of environmental conditions in the campus. It mainly focuses on the environmental management plan in the campus with environmental factors like quality of water, ventilation, vegetation, waste management practices, consumption of energy, harmful radiations of the campus, etc.,

For this purpose, to assess the quality of the different environmental factors, samples were analyzed at different places in the campus, viz., water quality, light intensity, air quality, noise pollution and electro-magnetic radiation. The data which was collected were assorted, scrutinized, analyzed and documented. Campus related preliminary interviews with the concerned staff were conducted. Student interaction also was carried out for this purpose. A report based on all these studies with regards to an environmental management plan at the campus with recommendations for further improvement is prepared.

Objectives and Scope

The purpose of this audit was to note that the campus follows environmentally friendly approaches in its regular routine. The implementation of these methods is done in the campus, across all departments, administrative bodies and students and were analyzed.

Following issues were noted during our visit:

- Present conditions at the campus.
- Environmental education through systematic environmental management approach.
- Improving environmental standards.
- Benchmarking for environmental protection initiatives.
- Sustainable use of natural resource in the campus.

Based on the available data, sampling and information provided by the college staff and officials, this report has been prepared and recommendations for betterment of campus environment are provided.

Summary of Findings

The main findings of the audit show that, all the students are aware about the need for environmental protection at a general level. It was also observed that a number of best practices such as water conservation, waste management, cleanliness, waste segregation, plantation, etc., are followed in the campus. There is also NSS unit, actively involved in environment related activities.

However, on detailed review, it was observed that, the college is following green practices at various levels. But certain processes could benefit from further review in order to improve their efficiency, fairness and consistency.

Infrastructure and college details

- The college has sufficient infrastructure for curricular and co-curricular activities.
- Rooms Classrooms, auditorium, department laboratories, library, department rooms, staffrooms, labs, ladies' room etc.
- Sufficient reading materials for students.
- Administrative block such as principal chamber, office room and department rooms.
- Underground and overhead water tanks.
- Computers (366 numbers) with internet facilities in office, principal chamber, department rooms and library with internet speed of 400 mbps.
- The institution is in area of 17.8 acres and has a built-up area of 20319.95 sq. mts.
- Classrooms and staff rooms in the institute are 32 and 38 respectively.
- There are 58 laboratories with all the facilities and are well ventilated.
- There are seminar halls with sufficient facilities.
- The campus has a gym, seminar room, sports room, hostels, canteen and cafe.

Green Cover Details

Green Cover

Plants and trees are essential for any educational institution. Green cover makes the campus aesthetically pleasing and also helps in providing good environment for the students. Planting saplings and maintaining the same has to be done periodically.

Observations:

This campus has a green area with various plants and trees of different species. The college have been moving a step towards creating a greener campus with different programs and plantation activities. The campus is rich in biodiversity with ample coconut, mango and various other trees.

The list of few trees/plants is as follows:

S1. No.	Scientific Name	Common Names
1.	Manilkara achras	Sapota
2.	Cocos nucifera	Coconut
3.	Punica granatum	Pomegranate
4.	Mangifera indica	Mango
5.	Syzygium cumini	Jamun
6.	Carica papay	Papaya
7.	Psidium guajava	Guava
8.	Cinamonum verum	Cinnamon
9.	Magnolia champaca	Chafa
10.	Annona squamosa	Custard
		Apple
11.	Citrus sp.	Lemon
12.	Azadirachtaindica	Neem Tree
13.	Selenicereus undatus	Dragon Fruit
14.	And different landscaping	
	decorative plants (More than 50	
	species)	

The details mentioned in the above tables are provided by the institution.

Green Audit Report, Energy Audit Report, & Environment Audit Report D.Y. Patil Technical Campus, Faculty of Engineering and Faculty of Management, Talsande, Kolhapur.







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Energy Management Details

Energy Management:

Energy management is an important aspect in institutions. Saving of electric power is a major part to minimize the greenhouse gas emissions to the environment. This can be achieved by using 5-star electrical appliances. Renewable energy can be harvested and be used in the campus.

Observations:

- Solar water heaters are installed in the hostel for hot water requirements.
- Labels, poster regarding energy saving have been put in the campus.

Recommendations:

- More labels, poster regarding energy saving can be put in the campus
- Solar powered street lights can be installed in the campus.

Details of switches, points, lights and fans in classrooms, office and staffrooms

	Sr	Staffroom	Tube	LED				Power		
Floor	No	Classroom/Lab/Office	Light	Bulb	Fan	Switch	Plug	P	Projector	Others
G.F	101	First Aid Cum Sick Room	2		1	4	1			
G.F	102	Stationary & Reprography	1	2	3	10	6			
G.F	103	FTM Lab		6		6	1			
G.F	104	Machine Lab	2	8	3	15	4		1	
G.F	105	Automobile Lab	8	9	2	21	18	2		
G.F	106	Staff Cabin	8		7	26	21			
G.F	107	Central Store	3		1	8	4			
G.F	108	Automobile Engine Lab	8	9	2	21	6		2	
G.F	109	Language Lab	8	4	4	74	61			
G.F	110	Computer Lab 1	8	4	4	73	62			
G.F	111	Central Programing Lab	15	10	5	158	143			
G.F	112	Central Library	24	42	18	89	83			
G.F	113	Classroom No 1	3	15	5	21	4		1	
G.F	114	Classroom No 2	4	20	6	21	7		1	
G.F	115	Classroom No 3	4	18	6	19	6		1	
G.F	116	Classroom No 4	3	15	5	16	2		1	
G.F	117	Exam Control Room	4		2	17	9			
G.F	118	Boys Toilet	2			5	1			
G.F	119	Girls Toilet	4			4	1			
G.F	120	Physics Engg Lab	7	3	4	25	13			
G.F	121	Chemistry Engg Lab	8	4	3	22	10			
G.F	122	SOM Lab		8	3	20	7			
G.F	123	Concrete Lab		12	3	37	28			
G.F	124	Basic Electrical Lab	8	4	3	31	21		1	
G.F	125	FM Lab	8	4	4	32	20			
G.F	128	Girls Toilet	4			5	1			
G.F	129	Boys Toilet	4			4	1			
G.F	130	IC Engine Lab		6	2	12	6		1	

Floo r	Sr No	Staffroom Classroom/Lab/Office	Tube Light	LED Bulb	Fan	Switch	Plug	Power P	Projecto r	3 watt LED	A C
G.F		Office		7	10	100	69			101	1
G.F		Principal Cabin			1	28	11			26	1
G.F		NSS Cabin	1		1	7	5				
G.F		T & P Department			1	9	6			4	
G.F		HR Cabin			1	6	6			4	
G.F		Lobby Lighting		52		39	9	1			
G.F		Stair Case Lighting	2								

Floo	Sr	Staffroom	Tube	LED				Power		Projecto	
r	No	Classroom/Lab/Office	Light	Bulb	Fan	Switch	Plug	P	MCB	r	Others
2	1	Staffroom	2		1	20	12				
2	2	Exam Control Room	2		1	10	2				
2	3	Administration	1		1	8	7				
2	4	Account Section			1	12	11				
2	5	Surveying Lab				14	2				
2	6	Principal Cabin	2		1	10	8				
2	7	Studio 2	9		4	34	16				
2	8	Studio 3	10		4	35	18				
2	9	Studio 4	9		4	34	18				
2	10	Library	10		4	20	14				
2	11	Classroom	8		4	30	14				
2	12	DRG Hall	10		4	30	14				
2		Lobby Lighting	10			7					

Floo	Sr	Staffroom	Tube	LED				Power		Projecto	
r	No	Classroom/Lab/Office	Light	Bulb	Fan	Switch	Plug	P	MCB	r	Others
2	308	Switchgear Protection/Drive	8		4	46	38		4		
2	309	Analog Electronics Lab	6		4	52	36		4		
2	310	MBA Computer Lab	7		5	54	36				
2	311	Computer Lab Civil	8	4	4	60	45				
2	312	HOD Cabin Civil	2		1	6	4				
2	313	Classroom No 9	4		5	14	4				
2	314	Serving Lab	5		6	54	44				
2	315	Tutorial Room No 2	1		2	5	1				
2	316	Geotechnical Lab	5		4	44	36				
2	317	Environment Lab	4		4	46	36	2			
2	318	Faculty Room			3	25	18				
2	319	Class Room No 10		12	5	16	6				

2	320	Classroom No 11			7	19	7			
2	321	Classroom No 12	6	8	7	23	6		1	
2	322	Classroom No 13	6	6	5	16	3			
2	323	Tutorial Room 03		1	1	16	13			
2	324	Boys Toilet	4			5	1			
2	325	Girls Toilet	4			5	1			
2	326	Power/Control System	8		4	54	49			
2	327	MATLAB	8		4	61	43			
2	328	Measurement Lab/ Elec HOD	8		4	55	37			
2	329	Database	8		4	80	62			
2	330	System Programing Lab	8		4	77	59			
2	331	DSMP Lab	8		4	65	47			

Floo r	Sr No	Staffroom Classroom/Lab/Office	Tube Light	LED Bulb	Fan	Switch	Plug	Power P	мсв	Projecto r	Others
2		DRG Hall No 1	12		13	32	3				
2		Lobby Lighting	17	1		29	3	1			
2		Stair Case Lighting	2								

Floo	Sr	Staffroom	Tube	LED				Power	Projecto	MC	
r	No	Classroom/Lab/Office	Light	Bulb	Fan	Switch	Plug	P	r	В	Others
3	401	Classroom No 22	4		5	14	4				
3	402	Classroom No 23	3	2	4	14	1				
3	403	Classroom No 24	3		4	14	1				
3	404	Classroom No 25	4		7	16	1				
3	405	DRG Hall	2		2	26	16				
3	406	Classroom No 28	4		7	14	1				
3	407										
3	408	Data & Project Lab	4		4	54	5				
3	409	MBA Activity Room	4	2	2	20	8				
3	410	MBA Classroom	6		3	9	3				
3	411	HMT Lab	8		4	30	22				
3	412	CAD Lab 1	4	2	4	63	57				
2	410	Rac Lab/Applied Mechanic			0	20	00				
3	413	Lab	6	2	3	30	22				
3	414	Computer Lab New	6	2	4	54	67				
3	415	E & TC HOD Cabin		2	1	4	3				
3	416	Classroom No 14	5		4	15	5				
3	417	Drawing Room	5		6	12	3				
3	418	Tutorial Room No 4	1		2	5	1				
3	419	Classroom No 1		12	5	16	6				
3	420	Classroom No 2	4		4	6	6				
3	421	Classroom No 18		12	5	15	3		1		
3	422	Classroom No 19	8	8	6	18	4		1		
3	423	Classroom No 20		16	7	20	4		1		
3	424	Classroom No 21		12	4	19	3				
3	425	Tutorial Room 25	4		2	9	5				
3	426	Boys Toilet	4			5	1				
3	427	Girls Toilet	3			5	1				

3	428	Communication Lab	4	4	2	59	41			
3	429	Analog/Power Electronics	6	2	2	59	41			
3	430	Advance communication	4	4	2	55	33			
3	431	CAD Lab 2	4	2	4	112	102			
3	432	Programming Lab	4	4	4	59	41			
3	433	MBA HOD Cabin	4	8	3	61	45	1		
3	434	Classroom No 27	3		4	10				

Floo r	Sr No	Staffroom Classroom/Lab/Office	Tube Light	LED Bulb	Fan	Switch	Plug	Power P	Projecto r	MC B	Others
3		Faculty Room	4		8	31	23				
3		Lobby Lighting	4	4		17	2				
3		Stair Case	2								

Environment Management Details

Water Management

Quality and Quantity of water is one of the most important parameters in a Green Campus. Water Quality and Quantity differs from place to place depending on the condition of the water source from which it is drawn. Presence of contaminants in the water can lead to health issues of the consumers. Basic monitoring of the quality of water is necessary from the health point of view of the campus occupants. Meticulous Water Management plan of the water available is also imperative for sustainable resource utilization.

Observation:

The main source of water for the campus is bore well, open well, with sufficient water for the college throughout the year. The water from the borewell is pumped to the overhead tank situated on the top floor of the building and then supplied to the complete building. Rainwater from the building is diverted to a filter and filtered rainwater is recharged to the borewell in the campus.

Recommendations:

- Rainwater harvesting filter has to be periodically inspected and cleaned.
- Farm lake and borewell surroundings need to be cleaned.

S1. No.	Parameter	Response
1.	Source of water for campus	River (Warana), borewell, farm lake
2.	No. of open Wells/Borewells	4 well, farm lake 2
3.	No. of motors used to lift water	14
4.	Horse power – Motor	105 HP Total
5.	Depth of open well –Total	NA
6.	Depth of borewell -Total	NA
7.	Water level open well	NA
8.	Water level borewell	NA
9.	Number of water tanks (underground)	NA
10.	Capacity of underground water tank	NA
11.	Number of water tanks (Overhead tank)	10
12.	Capacity of water tank (Overhead tank)	40000 Liters
13.	Quantity of water pumped every day	40000 Liters
14.	Any water wastage/why?	NIL
15.	Water usage for gardening	YES
16.	Waste water sources	College urinals and Canteen water
17.	Use of waste water	NIL
18.	Fate of waste water from labs	NA
19.	Whether waste water from labs mixed with ground water	NA
20.	Any treatment for lab waste water	NIL
21.	Whether any green methods practiced in labs	NA
22.	No. of drinking water filters/water coolers	Available at multiple points

23.	Rain water harvest available?	YES
24.	No. of units and amount of Rain water harvested	More than 20000 liters
25.	Any leaky taps	NIL
26.	Amount of water lost per day	NIL
27.	Any water management plan used?	Surface water in collected in farm lake
28.	Any water saving techniques followed?	Same as Above
29.	Are there any signs/posters reminding peoples to turn off the water?	YES
30.	Drinking water testing done?	YES

Source		Inlet			Outle	t
	TDS	рН	Temperature	TDS	рН	Temperature
	(ppm)		(°C)	(ppm)		(°C)
1	110	7.5	28	90	7.3	24





Rooftop rainwater harvesting and borewell recharge

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Bore well and water storage pond





Drinking water filters and coolers



Water sensors to avoid water wastage

Waste Management:

Anthropogenic activities generate waste, and it is the way these wastes are managed and disposed of, which can cause risks to the nature and to health. Waste generated causes pollution which is unpleasing and results in large amounts of litter which in turn cause environmental problems. Solid waste is generally classified into three categories: bio-degradable, non-biodegradable and hazardous waste.

Bio-degradable wastes include food wastes, canteen waste, wastes from toilets, etc.

Non-biodegradable wastes include what is usually thrown away in homes and schools such as plastic, tins and glass bottles, etc.,

Hazardous waste is waste that is likely to be a threat to health or the environment like chemicals from research labs, batteries, etc.,

Improper handling of these wastes such as dumping in pits or burning them, may cause harmful discharge of contaminants into soil and water supplies. Special attention should be given to the handling and management of such waste generated in the institutions.

Observations:

In this campus, the waste generated is managed as mentioned below: Bio-degradable Waste:

- Food waste from hostel waste is picked up and sent for animal feeding.
- Dry leaf generated in campus is sent to composting unit.

Non-Bio-degradable Waste:

• Paper, plastics generated by the campus is collected by the waste collection vehicle of the village panchayat.

E-Waste:

• E-Waste is stored in the campus.

Recommendations:

Based on the observations made during our site visit, following recommendations have been made by us:

- More educational posters related to water conservation, waste minimization, waste segregation can be put in the campus to create awareness.
- E-waste can be sent to certified recycler.

Sl. No.	Details	Remarks
1	Wastewater Source	Toilets, labs and
		canteen
2	Use of waste water	No
3	Fate of waste water from labs	NA
4	Weather waste water from labs is mixed	No
	with other wastewater sources	
5	Any treatment for lab waste?	NA

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Dust bins placed at various points in the campus



Dry leaf composting unit

Air Quality

Air quality plays a major role in day-to-day life. People spend more time indoors. Indoor air quality is the air quality within and around buildings and structures. Indoor air quality is known to affect the health, comfort, and well-being of building occupants. Poor indoor air quality has been linked to sick building syndrome, reduced productivity, and impaired learning in schools and colleges.

Observations:

Particulate matter was measured in all the classrooms, staff rooms and library. It was observed that the concentrations of PM 1, PM 2.5, PM 10 (in ppm), TVOC and HCOH were found to be negligible at that instant.

Sl. No.	Room					
D1. 110.	1100111	PM 1	PM 2.5	PM 10	нсон	TVOC
1	Transportation lab	10	14	18	<0.1	0.3
2	Fluid mechanics lab	11	15	20	ppm	mg/m ³
3	Civil lab	10	15	21	- 	to 0.5 mg/m ³
4	Corridor	11	13	22	-	mg/m²
5	Office	8	14	21	-	
6	Office	11	13	25	-	
7	Language lab	11	13	20		
8	Chemistry lab	9	14	20		
9	Physics lab	10	15	18		
10	Computer lab	10	15	19		
11	SOM lab	7	15	21		
12	Computing facility	10	14	22		
13	Classroom	11	15	21		
14	Classroom	12	14	18		
15	Classroom	11	14	19		
16	Classroom	8	16	19		

17	Library	10	18	19		
18	Classroom	9	17	20		
19	Classroom	11	16	21	<0.1	0.3
20	Classroom	10	15	22	ppm	mg/m ³
21	Survey lab	9	16	21		to 0.5
22	Environment lab	11	15	21		mg/m ³
23	Staffroom	10	18	22		
24	Staffroom	12	19	22		
25	Classroom	13	18	22		
26	Classroom	11	18	20		
27	Classroom	11	18	19		
28	Classroom	10	19	19		
29	CAD lab	12	20	18		
30	Digital Electronics lab	11	19	18		
31	Electrical lab	10	18	19		
32	Analogy lab	11	18	19		
33	Power lab	11	17	19		
34	E and TC lab	10	16	18		
35	E and TC lab	10	16	18		
36	E and TC lab	11	15	19		
37	Classroom	10	16	21		
38	Classroom	11	15	22		
39	Classroom	8	18	21		
40	Classroom	11	19	18		
41	Staffroom	11	18	19		
42	Staffroom	9	18	19		
43	Computer lab	10	18	19		
44	Staffroom	10	19	20		
45	Staffroom	7	20	21		

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46	Database lab	10	18	22		
47	System program lab	10	17	21		
48	Drawing room	9	16	21		
49	Classroom	11	15	22		
50	Classroom	10	16	22		0.3
51	Classroom	9	15	18	<0.1	mg/m ³
52	Classroom	11	18	20	ppm	to 0.5 mg/m ³
53	Micro lab	10	19	21		1115/ 111
54	Database lab	12	18	22		
55	Mechanical lab	13	18	21		
56	Mechanical lab	11	17	25		
57	Advance communication	11	16	20		
58	Thermal Engg. lab	10	16	20		
59	Applied mechanics lab	9	17	18		
60	Classroom	8	17	19		
61	Classroom	10	18	21		
62	Classroom	11	18	22		
63	Classroom	12	18	21		
64	Drawing room	11	19	22		
65	Classroom	11	18	24		
66	Classroom	8	18	24		
67	Classroom	9	17	25		
68	Corridor	10	16	24		
69	Corridor	12	16	23		
70	Lab	11	17	22		

The readings mentioned above are measured at that instant.

Light

The main part of the learning process is visual. The classroom is an arena for many activities, such as reading and writing, student or teacher presentations, tests, etc., hence, light plays a major role in classrooms. Well-lit classrooms are utmost essential in colleges. Working desks of the students require a minimum of light of 200 lux. Further, there may be certain zones that require specialized lighting. For example, the area in front of the board should have proper and separately switched presentation lighting.

Observations:

It was observed that all the classrooms are well lit. The light intensity was observed to be ranging from 250 lux to 350 lux.

Sl. No.	Room	Light intensity in lux
1	Transportation lab	260
2	Fluid mechanics lab	250
3	Civil lab	280
4	Corridor	280
5	Office	260
6	Office	268
7	Language lab	300
8	Chemistry lab	310
9	Physics lab	295
10	Computer lab	300
11	SOM lab	350
12	Computing facility	260
13	Classroom	350
14	Classroom	250
15	Classroom	280
	1	

16	Classroom	290
17	Library	300
18	Classroom	350
19	Classroom	350
20	Classroom	250
21	Survey lab	300
22	Environment lab	300
23	Staffroom	330
24	Staffroom	300
25	Classroom	330
26	Classroom	350
27	Classroom	330
28	Classroom	350
29	CAD lab	350
30	Digital Electronics lab	200
31	Electrical lab	300
32	Analogy lab	300
33	Power lab	350
34	E and TC lab	500
35	E and TC lab	260
36	E and TC lab	250
37	Classroom	280
38	Classroom	280
39	Classroom	260
40	Classroom	268
41	Staffroom	300
42	Staffroom	310
43	Computer lab	290
44	Staffroom	300

45	Staffroom	350
46	Database lab	350
47	System program lab	250
48	Drawing room	300
49	Classroom	260
50	Classroom	250
51	Classroom	280
52	Classroom	280
53	Micro lab	260
54	Database lab	268
55	Mechanical lab	300
56	Mechanical lab	310
57	Advance communication	290
58	Thermal Engg. lab	300
59	Applied mechanics lab	350
60	Classroom	350
61	Classroom	250
62	Classroom	300
63	Classroom	260
64	Drawing room	250
65	Classroom	280
66	Classroom	280
67	Classroom	260
68	Corridor	268
69	Corridor	300
70	Lab	310

Noise

Noise is unwanted sound considered unpleasant, loud or disruptive to hearing. Unwanted sound is not preferred in any classroom. The Noise levels in the class room should be below 35 dB in an unoccupied classroom. Higher levels of noise in the classroom may distract the students.

Observations:

Noise levels were measured in the classrooms and were found to be in the range of 30 dB to 55 dB in an unoccupied classroom. The noise levels in classrooms with students were ranging about 55 dB to 72 dB.

S1. No.	Room	Noise in decibel	
		Minimum	Maximum
1	Transportation lab	35	55
2	Fluid mechanics lab	45	72
3	Civil lab	50	60
4	Corridor	45	55
5	Office	30	40
6	Office	45	55
7	Language lab	45	60
8	Chemistry lab	50	65
9	Physics lab	45	60
10	Computer lab	45	70
11	SOM lab	50	65
12	Computing facility	30	45
13	Classroom	35	45
14	Classroom	30	45
15	Classroom	35	50
16	Classroom	30	55

17	Library	40	55
18	Classroom	40	60
19	Classroom	45	65
20	Classroom	40	70
21	Survey lab	35	70
22	Environment lab	30	65
23	Staffroom	35	60
24	Staffroom	35	60
25	Classroom	40	60
26	Classroom	40	55
27	Classroom	30	55
28	Classroom	40	60
29	CAD lab	45	65
30	Digital Electronics lab	45	60
31	Electrical lab	30	50
32	Analogy lab	35	65
33	Power lab	35	60
34	E and TC lab	25	40
35	E and TC lab	35	40
36	E and TC lab	45	55
37	Classroom	50	60
38	Classroom	45	65
39	Classroom	30	60
40	Classroom	40	70
41	Staffroom	45	65
42	Staffroom	45	45
43	Computer lab	30	45
44	Staffroom	45	45
45	Staffroom	50	50

46	Database lab	30	55
47	System program lab	35	55
48	Drawing room	30	60
49	Classroom	35	65
50	Classroom	40	55
51	Classroom	40	72
52	Classroom	45	60
53	Micro lab	40	55
54	Database lab	35	40
55	Mechanical lab	30	55
56	Mechanical lab	35	60
57	Advance communication	35	65
58	Thermal Engg. lab	40	60
59	Applied mechanics lab	40	70
60	Classroom	30	65
61	Classroom	40	45
62	Classroom	45	45
63	Classroom	45	45
64	Drawing room	30	55
65	Classroom	40	60
66	Classroom	45	65
67	Classroom	40	65
68	Corridor	30	70
69	Corridor	35	70
70	Lab	40	65

Electro Magnetic Radiations

Electromagnetic radiation (EMR) consists of waves of the electromagnetic (EM) field, propagating through space, carrying electromagnetic radiant energy. EMR is generated by electronic devices and constant exposure to EM radiations is not advisable.

Observations:

Electromagnetic radiations were measured in all the classrooms, staff rooms, and library. It was observed that the Electromagnetic radiations were zero in all these places.

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Measuring EMR, light, sound, PM 1, PM 2.5, PM 10, TVOC and HCOH

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Measuring EMR, light, sound, PM 1, PM 2.5, PM 10, TVOC and HCOH





Interaction with students

NSS Activities

NSS wings of the college conduct various activities related to environment throughout the year.

Plant Club team details

Sl. No.	Name	Designation
1	Dr. Satish R. Pawaskar	Director (President of Eco-
		club/green club Team)
2	Prof. Kedar S. Redekar	Faculty Coordinator
3	Prof. Mansing M. Rabade	Faculty Representative
4	Prof. Mohasin S. Bijali	Faculty Representative
5	Prof. Abdulamanan S. Faras	Faculty Representative
6	Pratiksha Sharad Shinde	Student Coordinator (Civil)
7	Komal Sharad Nadagire	Student Representative
		(Electrical)
8	Dipti Dasharath Patil	Student Representative (E &
		TC)
9	Pavan Vilas Patil	Student Representative
		(Mech.)
10	Nikita Vikram Shewale	Student Representative (CSE)



During our visit

NISARGA CONSULTANTS
Basavaraj Complex,
Sadashiv Nagar, APMC Road,
BELAGAVI - 590 001

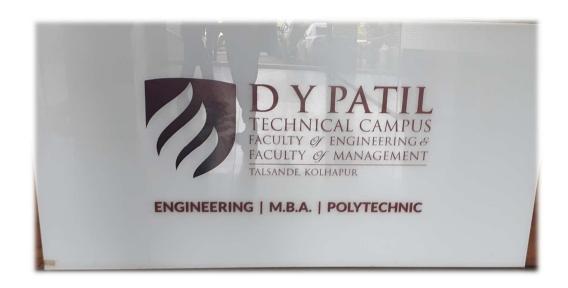
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GREEN, ENERGY AND ENVIRONMENT AUDIT CERTIFICATE

This Certificate is Presented To

<u>D.Y. Patil Technical Campus, Faculty of</u> <u>Engineering and Faculty of Management,</u> <u>Talsande, Kolhapur</u>

Our team of Environmental Engineers has analyzed Green, Energy, and Environment practices followed by the college.

PRADEEP NAGAMALLI

B.E., M.TECH. (ENV. ENGG.)

NISARGA CONSULTANTS

AUDIT YEAR: 202<mark>2</mark>

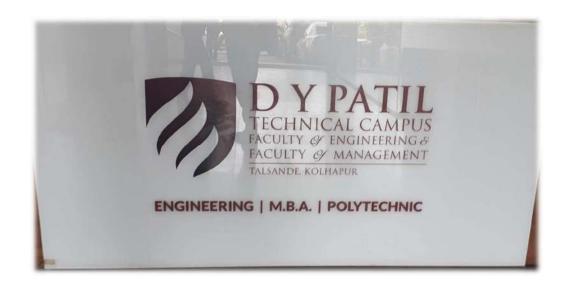




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PRADEEP NAGAMALLI

B.E., M.TECH. (ENV. ENGG.)

NISARGA CONSULTANTS

AUDIT YEAR: 2022





AND ENVIRONMENT AUDIT CERTIFICATE

This Certificate is Presented To:

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Our team of Environmental Engineers has analyzed Green, Energy, and Environment practices followed by the college.

PRADEEP NAGAMALLI

B.E., M.TECH. (ENV. ENGG.)

NISARGA CONSULTANTS

AUDIT YEAR: 2021 - 2022



Green, Energy and Environment Audit

CERTIFICATE

D.Y. Patil Technical Campus, Faculty of Engineering and Faculty of Management,

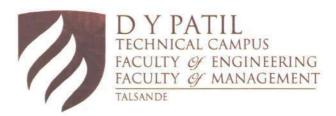
Talsande, Kolhapur

Our team of Environmental Engineers has analyzed Green, Energy, and Environment practices followed by the college.



SR. ENVIRONMENTAL ENGINEER
NISARGA CONSULTANTS
AUDIT YEAR: 2019 - 2020





Ref No:	
KET IVO.	
1101	

Action Taken Report: Clean and Green Campus Initiatives

Initiative: Clean and Green Campus

Introduction:

This report outlines the progress and actions taken as part of the "Clean and Green Campus" initiatives aimed at fostering a sustainable and eco-friendly environment within our campus premises. The initiatives encompass a range of facilities and activities designed to minimize our carbon footprint, enhance the overall cleanliness, and contribute to the preservation of our natural surroundings.

Initiative Details:

The following initiatives have been implemented to achieve a cleaner and greener campus:

1. Cleaning Drives:

Regular cleaning drives have been organized across the campus to ensure the removal of litter and waste. The cleaning drives involve students, faculty, and staff members and have been successful in maintaining a clean and pleasant environment.

2. Dustbins for Waste Collection:

Strategically placed dustbins for segregating waste have been introduced throughout the campus. Proper waste segregation promotes recycling and proper disposal of waste, minimizing environmental impact.

3. Plantation for Flora and Fauna:

A comprehensive plantation drive was initiated to enhance the flora and fauna on campus. Native trees, shrubs, and plants have been planted, not only beautifying the surroundings but also providing habitats for local wildlife.

4. Electrical Vehicles:

As part of our commitment to reducing carbon emissions, the campus has introduced electric vehicles for transportation within the premises. This shift has significantly decreased our reliance on fossil fuels and contributed to cleaner air quality.

5. Paperless Communication:

To reduce paper consumption, communication methods such as college software, WhatsApp, and email are utilized for administrative purposes. This has minimized paper waste and streamlined communication processes.

Dist.Kothapur

TALSANDE

President : Dr. Sanjay D. Patil

Director: Dr. Satish R. Pawaskar

Address: Wathar-Warna Nagar Road, Talsande, Tal.- Hatkanangale, Dist.- Kolhapur, Maharashtra. 416112

Email: engg.dyptc@gmail.com/ mba.dyptc@gmail.com | website: foet.dypgroup.edu.in

DTE code: 6780 | phone : 7666546366



Ref	No:	

Solar water heaters have been installed in various campus buildings to harness renewable energy for heating water. This sustainable approach not only reduces energy consumption but also lowers utility

Progress and Achievements:

Since the initiation of the Clean and Green Campus initiatives:

- The campus is noticeably cleaner due to regular cleaning drives, fostering a more appealing and hygienic environment.
- Effective waste segregation has led to an improvement in recycling rates and a decrease in improper waste disposal.
- The increased green cover resulting from the plantation drive has improved the aesthetic appeal and biodiversity of the campus.
- The adoption of electric vehicles has contributed to the reduction of carbon emissions and noise pollution on campus.
- Transitioning to paperless communication methods has led to a significant reduction in paper usage and administrative efficiency improvement.
- Solar water heaters have lowered the campus's reliance on conventional energy sources, reducing the carbon footprint and energy costs.

Future Steps:

While considerable progress has been made, there are plans for continuous improvement and expansion of these initiatives:

- Scaling up the plantation drive to include more native species and creating dedicated green spaces.
- Increasing the number of electric vehicles and establishing charging infrastructure.
- Promoting further adoption of paperless communication methods and reducing overall paper consumption.
- Exploring additional renewable energy sources to enhance the campus's sustainability.

Conclusion:

The Clean and Green Campus initiatives have been successful in transforming our campus into a cleaner and more environmentally conscious space. The combined efforts of students, faculty, and staff have led to positive changes that align with our commitment to a sustainable future. The progress made so far serves as a foundation for ongoing improvements and endeavors.

TALSANDE

D.Y. Patil Technical Campus aculty of Engineering & Faculty of Managemen Talsanda, Tal, Hatkanangole, Dist. Kethanur

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President: Dr. Sanjay D. Patil

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