SAHYAGIRI ENTERPRISES

Kalpataroo Building, Near Ram Mandir, Ward No.2 Jath
Taluka- Jath, Dist- Sangli 416404
Phone: 91-9028075073 **Email:** sahyagirienterprises@gmail.com
ISO 9001:2015 Certified Organization

Green/Environmental & Energy Audit Certificate

This is to certify that the Sahyagiri Enterprises has conducted detailed green audit report of **Appasaheb Birnale College of Architecture, Sangli** during academic year 2021-2022 to assess the green initiative planning, efforts, activities implemented in college campus like plantation, waste management, rain water harvesting, energy conservation, biodiversity conservation and various environmental activities. This green audit is also aimed to assess impact of green initiative for maintenance of the campus.

The college has submitted necessary data and credentials for scrutiny. The efforts taken by the management, faculty and students towards environment and sustainability are highly appreciated.

Green Audit In charge
M. M. Jadhav

SAHYAGIRI ENTERPRISES PRIVATE LIMITED
DIRECTOR
V. M. Jadhav

GREEN/ENVIRONMENTAL & ENERGY AUDIT REPORT (2021-2022)

Shri Vasantrao Banduji Patil Trust's

Appasaheb Birnale College of Architecture, Sangli

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1.0 ACKNOWLEDGEMENT

Sahyagiri Enterprises Green Audit Team thanks the management of Appasaheb Birnale College of Architecture for assigning this important work of Green Audit. We appreciate the co-operationm to our team for completion of study.

Our special thanks to:

- Principal of the college – Dr. Arundhati Pravin Wategave
- IQAC Head – Ar. Geetanjali Daphtardar
- IQAC Member – Er. Pravin Pise
- Environment Expert at the campus – Ar. Geetanjali Daphtardar
- Green Audit coordinator– Ar. Meera Sinhasane
- Teaching & Supporting Staff of College

For giving us necessary inputs to carry out this very vital exercise of Green Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

2.0 DISCLAIMER

Sahyagiri Enterprises Green Audit Team has prepared this report for Appasaheb Birnale College of Architecture 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.

Sahyagiri Enterprises and its staff shall keep confidential all information relating to your organisation and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies. Sahyagiri Enterprises staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.

Report by: Mayuri M. Jadhav

3.0 CONCEPT

Green Audit is defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' 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 exercises can cause risk to the health of inhabitants and the environment. Through Green 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. Green audit is assigned to the criteria 7 of NAAC, (National Assessment and Accreditation Council) which is a self-governing organization of India which declares the institutions as Grade A, B or C according to the scores assigned during the accreditation.

4.0 INTRODUCTION

A Nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. Educational institutions now days are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the energy savings, recycle of waste, water reduction, water harvesting etc. The activities pursued by colleges can also create a variety of adverse environmental impacts.

Environmental auditing is a process whereby an organization's environmental performance is tested against its environmental policies and objectives. Green audit is defined as an official examination of the effects a college has on the environment. As a part of such practice, internal environmental audit (Green Audit) is conducted to evaluate the actual scenario at the campus.

Green audit is a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. Green auditing and the implementation of mitigation measures is a win-win situation for all the college, the learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus.

Green auditing promote financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the

world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence Sahyagiri Enterprises has developed a compatible system by developing locally-applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance.

This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

5.0 OVERVIEW OF INSTITUTE

Trust is the outcome of the hard efforts of an eminent social worker of Sangli, Late Shri. Appasaheb Birnale (Ex. MLA and EX. President ZP Sangli) in the year 1971, in the memory of the Shankar Maharshi the Ex. Chief Minister of Maharashatra, Late Padmabhushan Dr. Vasantdada Patil for his n contribution as a great freedom fighter and his revolutionary policies of uplifting and widening the field of education and above all for their matchless services to humanity and mankind. The main idea behind his trust was to impart professional, advanced and technical education to the deserving and needy students of rural areas. These Institutes are an important milestone in the progress of their dreams. The trust is highly indebted to sanguine efforts and constant inspiration of Shri. Babanrao Birnale Chairman of The trust to make these dreams come true.

The management started Appasaheb Birnale College of Architecture Sangli in 1993. Institute is approved by AICTE, New Delhi, Government of Maharastra and affiliated to Shivaji University, Kolhapur. College has 2 Acre campus Area.

College provides instructions to the students for five year degree course Bachelor of Architecture (B. Arch.), 2 year masters course M. Arch. Master of Architecture . The college, right from its inception has shown academic excellence and students have won meritorious awards and have maintained top ranks in the University examinations as well as in extra-curricular activities. Total Student strength of college is 280. College has total 42 teaching staff and 18 non-teaching staff. College has highly qualified staff.

The infrastructure of a college plays a vital role in the development of the college as the students are now focusing on class rooms, studios etc. while selecting a college. It is important that the college has very good infrastructure with specious Classrooms, studios, seminar Halls, Library, Computer Center & all basic aementies. Various indoor and outdoor games are conducted by college.

The college has also adopted the 'Green Campus' system for environmental conservation and sustainability. The goal is to reduce CO_2 emission, water use while creating an atmosphere where students can learn and be healthy.


E-Mail-mit24sangli@gmail.com
Web-www.abcasangli.org
अप्पासाहेब बिरनाळे कॉलेज ऑफ आर्किटेक्चर, सांगली.
APPASAHEB BIRNALE COLLEGE OF ARCHITECTURE, SANGLI

6.0 AUDIT OBJECTIVES AND SCOPE

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To introduce and aware students to real concerns of environment and its sustainability.
- To secure the environment and cut down the threats posed to human health by analysing the pattern and extent of resource use on the campus.
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.
- Developing an environmental ethic and value systems in young people.
- Improving environmental standards.
- Benchmarking for environmental protection initiatives.
- Enhancement of College profile.

7.0 EXECUTIVE SUMMARY

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development.

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes out-dated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

Appasaheb Birnale College of Architecture done internal green assessment and annual reports published for continual improvements; QS Programme and doing their bid towards environmental protection and environmental awareness at local and global front.

The methodology include: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. It works on the several facets of ‘Green Campus’ including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

This audit report contains observations, appreciations and recommendations for improvement of environmental consciousness.

8.0 METH0DOLOGY

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Waste Management
- Energy Conservation
- Water Conservation
- Green area management/biodiversity survey
- Noise, Ventilation and Illumination study
- Carbon Footprint
- Best Practices for Environment

9.0 OBSERVATIONS, APPRECIATIONS AND RECOMMENDATIONS

9.1 WASTE MANAGEMENT

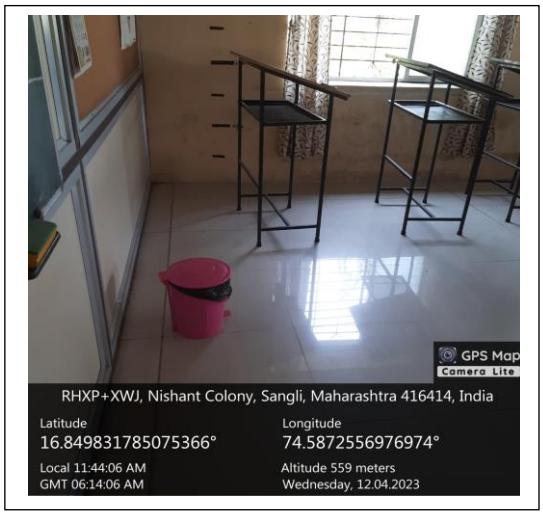
This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair and reuse. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus. The different solid wastes collected as mentioned above.

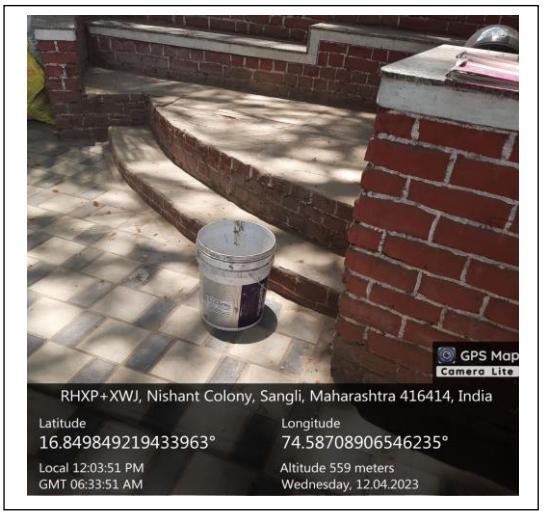
A) Observations:

The total organic waste collected in the campus is 240 kg/month. Waste generated from trees is a major solid waste in the campus. Near about 3 kg/month of non-biodegradable waste is generated in the campus. The waste is segregated at source by providing separate dustbins for Bio-degradable, Non-Bio-degradable. Single sided used papers reused for writing and printing in all departments. Very negligible plastic waste is generated by departments, office, garden etc. but it is neither categorized at point source nor sent for recycling. College has E-waste collection centre. The institute has adopted one composting unit in campus having capacity of 200 kg and size 5.5”x2.5”x1.5”. The main purpose of this is to breakdown & decomposes all kind of organic waste by using microorganisms that require oxygen. called compost. After complete process of composting, it is used as manure for trees in the campus.

Composting Unit

Dustbins are provided in the campus for Degradable and Non-Degradable waste





Dustbins are provided throughout the college premises for waste collection

E-waste collection centre

Sanitary Napkin Incinerator

B) Appreciations:

- Each and every place of campus is provided with dustbin.
- E-waste is collected and supplied to E-waste management and disposal facility in order to dispose E-waste in scientific manner.
- Reuse of paint buckets as a dustbins in the campus.
- Paper waste generated from office and departments are transported to the vendors for recycling.
- Every department and office tries to reduce consumption of paper.
- College reuses empty side of printed paper.
- Ash from sanitary napkin incinerator is properly disposed off.

C) Recommendations:

- Make full use of all recycling facilities provided by City Municipality and private suppliers, including plastic bottles, batteries, print cartridges, cardboard and furniture.
- Provide sufficient, accessible and well-publicized collection points for recyclable waste with responsibility for recycling clearly allocated.

9.2 WATER CONSERVATION

This indicator addresses water consumption, water sources, irrigation, storm water appliances and fixtures. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

A) Observations:

The study observed that bore well water is main sources of water in the campus. Water is used for drinking, toilets and gardening purpose. During the survey, no loss of water is observed, through leakages and no over flow of water from overhead tanks. The data collected from all the departments is examined and verified. On an average the total use of water in the college is 1,500 L/day, which include 1,300 L/day for domestic purposes, 200 L/day for gardening. College has R.O system having capacity 200 LPH. The college has rain water harvesting facility in a campus. Water from rooftop of

the college is collected and it is used for ground water recharge and it helps to increase water table. Water used for drinking purpose analyzed as per IS 10500:2012 drinking water specification and observed it was potable**.**

Daily Water Consumption

Parameter	Quantity	Total water consumption
Total overhead water tanks	5	1.3 m3
College building water consumption	1.2 m3	
RO water consumption	0.3 m3	

R.O. System

Rainwater Harvesting System

Rainwater Collection Pit

Water Sample Analysis Report

Sr. No.	Parameters	Results	Acceptable Limit as per IS 1O5OO: 2012	Units
1.	Colour	< 1	Max. 5	Hazen Units
2.	Odour	Agreeable	Agreeable	-
3.	pH	7.08	6.5-8.5	-
4.	Turbidity	0.4	Max. 1	N.T.U.
5.	Total Dissolved Solids	87	Max.5OO	mg/L
6.	Calcium (as Ca)	17	Max.75	mg/L
7.	Chloride (as Cl)	13	Max.25O	mg/L
8.	Floride (as F)	*< 0.05*	Max.1	mg/L
9.	Iron (as Fe)	<0.06	Max.0.3	mg/L
10.	Magnesium (as Mg)	5	Max. 30	mg/L
11.	Alkalinity (as $CaCO_3$)	28	Max.2O0	mg/L
12.	Nitrate (as NO_3)	5.22	Max. 45	mglL
13.	Sulphate (as SO_4)	2.90	Max.200	mglL
14.	Total Hardness (as CaCO3)	60	Max.2OO	mg/L
15.	E. coli	Absent	Not Detectable	/100 ml
16.	Total Coliforms	Absent	Not Detectable	/100 ml

B) Appreciations:

- Water is properly used in the campus and water reusing strategy is followed by the college.
- Rain water is collected and used for ground water recharge.
- Waste water generated from campus is connected to sewer system

C) Recommendations:

- Year wise water consumption report.
- Reuse of wastewater from R.O. (each lobby) should be used for gardening purpose.

9.3 ENERGY CCONSERVATION:

A) Observations:

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

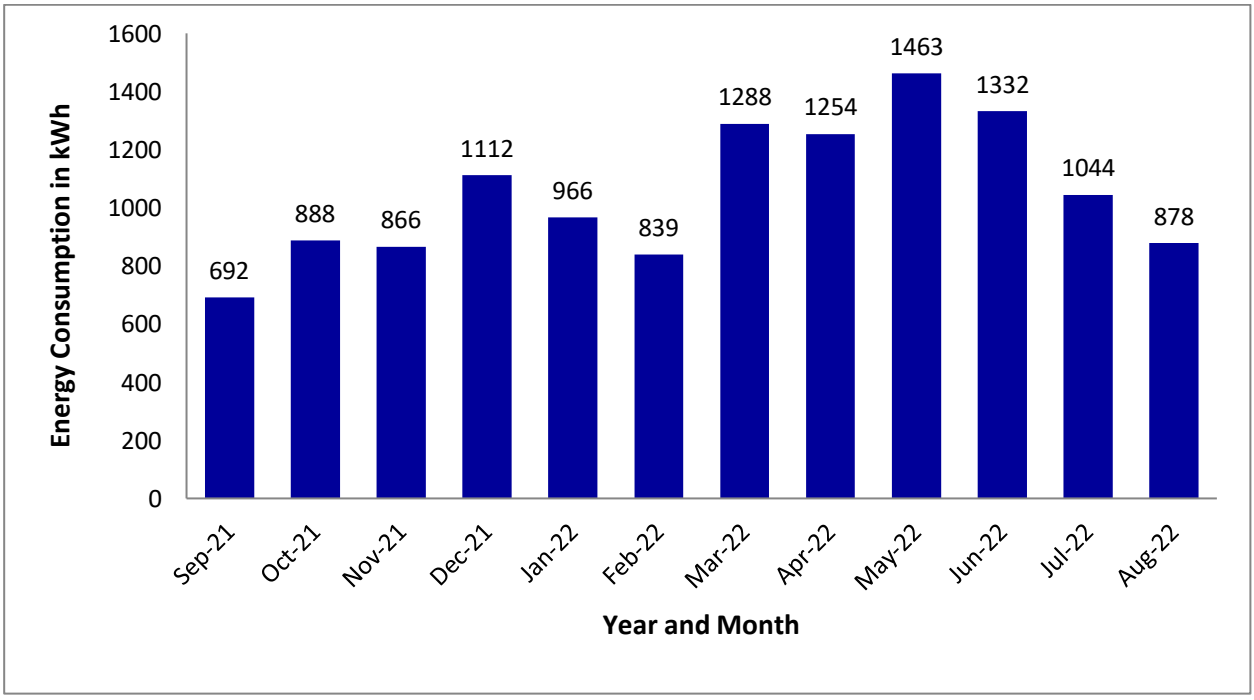
Energy source utilized by all the departments and common facility center is electricity only. Maximum energy consumption is by major energy consuming equipment.

All the departments and common facility centers are equipped with LED lamps. Approximately 74 computers, 7 Xerox machines & printers, LED 3 W lamps-80, 12 W-15, 100 W-8, 200 W focus-8, 128 fans, 300 tubes, 17 projectors, 8 invertors, 2 A.C with 3 star rating. Equipment like Computers is used with power saving mode. Also, campus administration runs switch-off drill on regular basis. In

various labs after completion of work, electricity was shut down; it is one of the practices for energy conservation.

The campus imports electricity from Maharashtra State Electricity Distribution Co. Ltd. The total electricity that was imported by the college during the year 2021-2022 is as shown below. Total 12 month's energy consumption of the campus is presented below for the year 2021-2022. The graph shows that institute requires more electricity and it costs too much. If instate install solar panels then it will saves electricity charges.

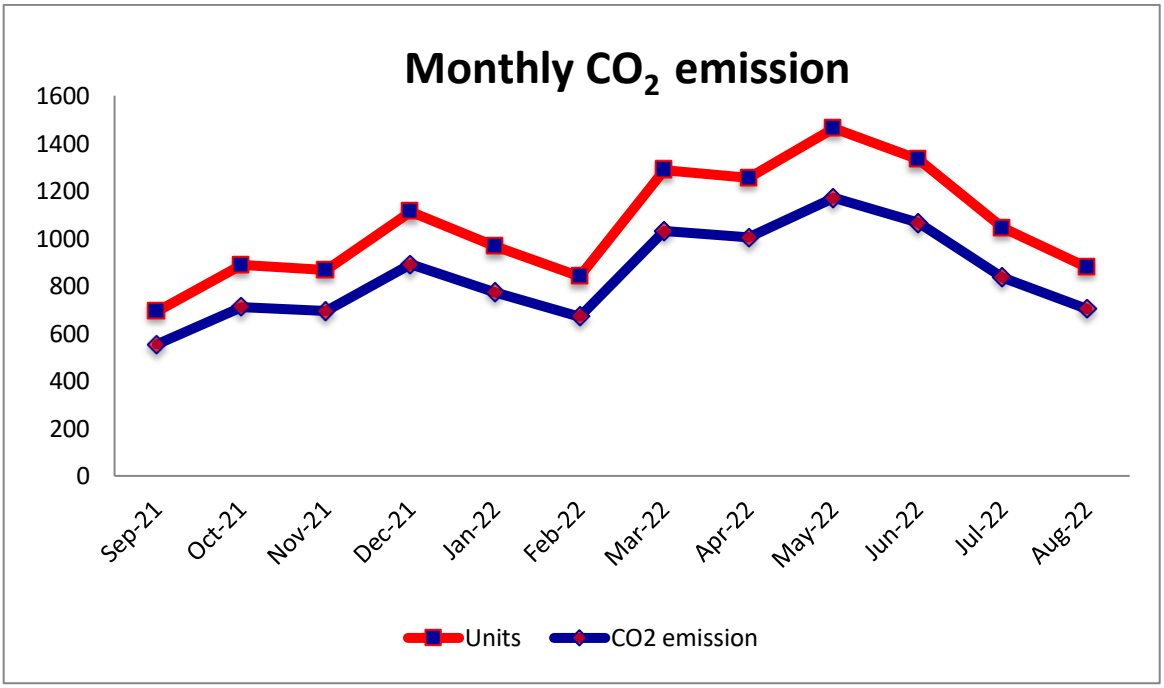
Month	Energy Consumption in units
September -2021	692
October -2021	888
November -2021	866
December -2021	1112
January -2022	966
February -2022	839
March -2022	1288
April -2022	1254
May -2022	1463
June -2022	1332
July -2022	1044
August-2022	878
Avg.	1051.833



CARBON- DIOXIDE EMISSION

For consumption of 1 Unit (1 kWh) of Electricity, the CO_2 emitted is 0.8 Kg. OR the Emission is 0.8 Kg/kWh. In the following Table we present the total units consumed and CO_2 emitted as under:

Sr.No.	Month	Energy consumption (kWh)	CO_2 emitted in kg
1	September -2021	692	553.6
2	October -2021	888	710.4
3	November -2021	866	692.8
4	December -2021	1112	889.6
5	January -2022	966	772.8
6	February -2022	839	671.2
7	March -2022	1288	1030.4
8	April -2022	1254	1003.2
9	May -2022	1463	1170.4
10	June -2022	1332	1065.6
11	July -2022	1044	835.2
12	August-2022	878	702.4
13.	Avg.	1051.833	841.4667



B) Appreciations:

- Appreciate that college has 3 star electrical appliances like A.C.
- Campus is well equipped with LED lamps.
- College has LED computers.

C) Recommendations:

- Try to install solar street light throughout the campus.
- Installation of solar power plant is necessary.

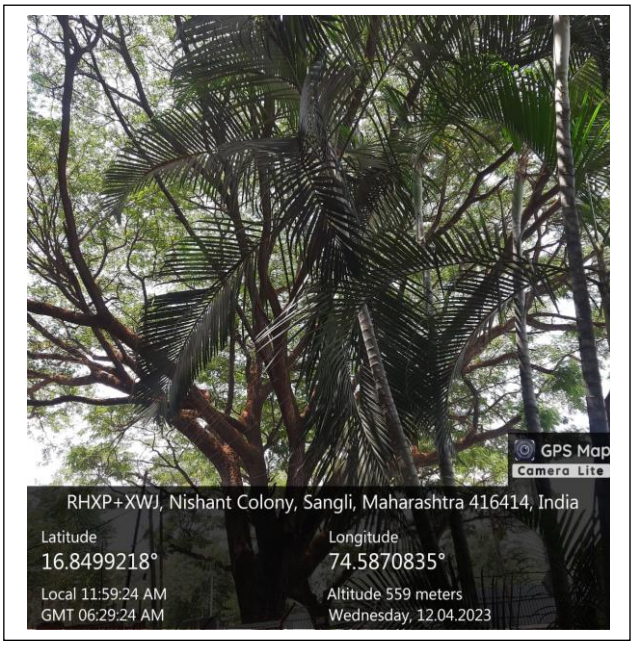
9.4 GREEN AREA MANAGEMENT/BIODIVERSITY SURVEY

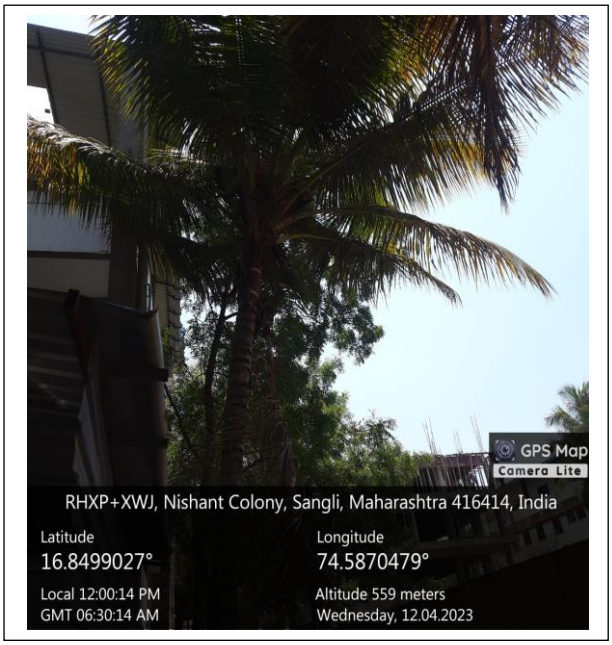
This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programs.

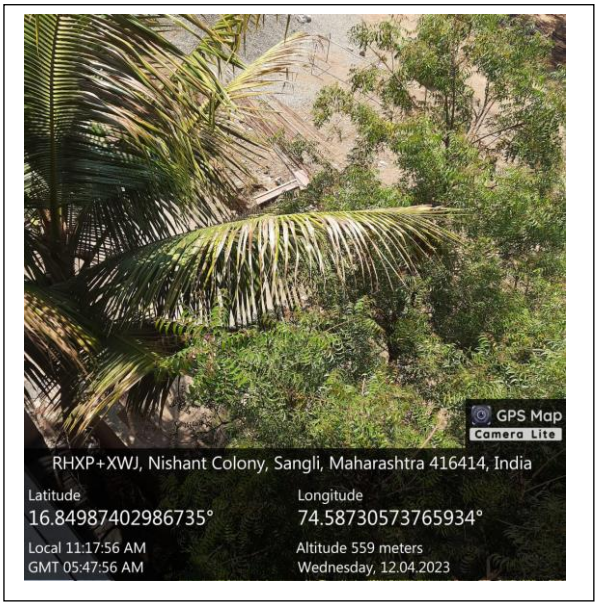
A) Observations:

To create- green cover, eco-friendly atmosphere, pure oxygen at the college campus, plantation program is organized every year with involving all students, principal and all departments faculty members.

Campus is located in the vicinity of approximately 5 (species) of trees total no. 10, 10(species) of shrubs total no.20. Approximately 6 species of birds, 5 species of mammals and 4 species of reptiles are found in the campus. Various tree plantation programs are being organized during the month of July and August at college campus and outside the college campus. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among students and staff members. The plantation program includes plantation of various type of indigenous species of ornamental and medicinal as well as wild plant species under the biodiversity and ecological survey. The Institute has a policy of gift a plant to guests in any program. It is a good thing for environment.







Green Campus

B) Appreciations:

- College has Eco club and various activities are taken under this club for conservation of Environment.
- Appreciate that the college has variety of trees, bushes & shrubs**.**
- Appreciate that college celebrates 1st June as 'Krushi Din', every year and plant trees on this day to make the campus Greener.
- Appreciate that college celebrates 5th June as 'Environment Day', every year and plant trees on this day to make the campus Greener.

C) Recommendations:

- Review periodically the list of trees planted in the campus, allot numbers and names to the trees and keep records.
- Try to plant more trees in the campus.
- Promote environmental awareness as a part of course work in various curricular areas, independent research projects and community services.
- Ensure that an audit is conducted annually. And action is taken on the basis of audit report and recommendation and findings.

9.5 NOISE, VENTILATION AND ILLUINATION MONITORING

1. Noise Study:

The noise levels measurements were carried out using Noise level meter. The Noise level survey was carried out at two locations, at outside as well inside the study area campus. The major source of noise identified in the study area has been predominantly the vehicular movement and the transportation activities.

Location	Time	1	2	3	4	5	Noise Level Readings dB (A)
Outside	**11:15**	74	69	65	56	51.5	63.1
	12:15	71	82.9	52	55.8	56.2	63.58
Inside	**11:20**	74.2	55	61	57	60	61.44
	12:20	59.2	61.5	58	64.5	62	61.04
As per The Noise Pollution (Regulation & control) Rules, 2ooo (Rules 3(1) and 4(1))							

Area Code	Area Type	Limits in dB(A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
B	Commercial	65	55

Noise Level Monitoring Outside the Campus

Noise Level Monitoring Inside the Campus

Observation:

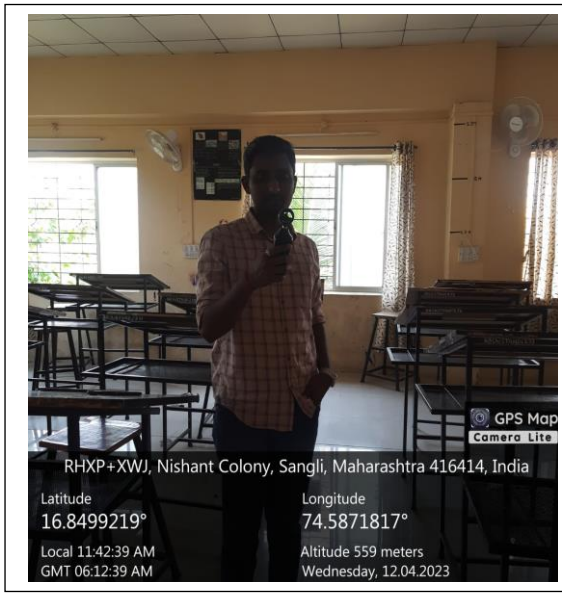
All results of Noise level monitoring (Inside & Outside) found within limits as per the Noise Pollution (Regulation & control) Rules, 2000.

2. Ventilation Study:

The ventilation study was carried out by using anemometer. The study was carried out in classroom.

Sr. No.	Name of Location	Temperature (^{o} c)	Air velocity (m/s)
1.	Classroom	30.3	0.9
2.	Studio	30.7	1.1

Ventilation Monitoring in Classroom



Ventilation Monitoring in Studio

Observation:

All results of ventilation study (classroom& Laboratory) found within limits as per Factory Act 1948, Rule 22-A.

3. Illumination Study:

The Illumination Study was carried out using Lux meter. And it was carried out in classroom.

Sr. No.	Location	Time	Lux Level Reading (LUX)				Average Lux
			1	2	3	4	
1.	Studio	11:00	195	210	280	287	243
2.	Classroom	11:30	205	190	267	297	239.75

Illumination Monitoring in Classroom

Illumination Monitoring in Studio

Observation:

All results of Illumination Study (Classroom& Laboratory) found within limits as per MF Rules-Section-35, Schedule B.

9.6 CARBON FOOTPRINT

A carbon footprint (CF) is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions.

A carbon footprint is an estimate of the climate change impact of activity – such as making a product, living a lifestyle or running a company.

There are many existing and evolving standards for calculating carbon footprints but in truth no footprint is precise. For more complicated activities these uncertainties are greatly multiplied.

a) Carbon Emissions:

List of carbon emissions

Classification/Scope	Sources	Description
Scope 1 (Direct)	Equipments usage	DG set
Scope 2 (Indirect)	Electricity Use	Appasaheb Birnale College of Architecture uses electricity to heat, cool, light, and run appliances at its facilities.
Scope 3 (Indirect)	Employee commuting	Employees commute from their residences to the college

Emission Data and Calculations:

- Scope 1 – All Direct Emissions from the activities of an institution or under their control. Including fuel combustion on site such as gas, etc.

Scope 1 Emissions

Type of Fuel	Quantity	Emission Factor	KgCO2/month
Fuel used for DG set	30 lit/month	2.653	79.59
TOTAL SCOPE 1 EMISSIONS			**79.59 kgCO2/month**

- Scope 2 – Indirect Emissions from electricity purchased and used by the institution. Emissions are created during the production of the energy and eventually used by the organization.

Emissions from Purchased electricity:

Indirect Emissions /scope 2 emissions

Type of Emission	Quantity	Emission Factor	$KgCO_2$
Emissions from Purchased electricity	1051.833 kWh/month	0.97	1020.28 $KgCO_2$/month
TOTAL SCOPE 2 EMISSIONS			**1020.28 $KgCO_2$/month**

- Scope 3 – All Other Indirect Emissions from activities of the institution, occurring from sources that they do not own or control.

A. Employee Transportation: Increase in student intake can lead to increased greenhouse gas (GHG) pollution caused by the resulting growth in vehicular traffic, energy use, and other activities. This unit seeks to identify the impact on global climate change through its emissions of greenhouse gases (GHGs), notably carbon dioxide (CO2). Transportation is the fastest growing major contributor to global climate change, accounting for 23% of energy-related carbon dioxide (CO2) emissions.

Fuel Consumption through Upstream Transportation

Mode of transportation	Daily Count	Travelling distance (km/Vehicle) (to and fro)	Total Km	Emission Factor	Kg CO_2
2 wheeler (teachers)	56	10	560	0.0319	17.864
4 Wheeler (Cars)	8	10	80	0.13	10.4
TOTAL					**28.264 KgCO2/day**
					847.92 KgCO2 /month

Fuel Consumption through students Transportation

Mode of transportation	Daily Count	Travelling distance (km/Vehicle) (to and fro)	Total Km	Emission Factor	Kg CO_2
2 wheeler (teachers)	150	10	1500	0.0319	47.85

4 Wheeler (Cars)	2	10	20	0.13	2.6
TOTAL					**50.45 KgCO2/day**
					1513.5 KgCO2 /month

B) Solid Waste Generation:

Wet Solid Waste Generation

Wet waste generated	Emission factor	Total Kg CO2
240 kg/month	0.21	**50.4 KgCO2 /month**

Total emissions throughout a year

Total emissions throughout a year

Reporting Year	Total Emissions (kg CO2 /month)	Total Emissions (kg CO2 /year)
2022	**3511.69**	**42140.28**

C) Recommendations:

- Make sure most teachers and students opt for public transport instead of using personal vehicle.
- Use as much renewable sources of energy as you can.
- Reduce the waste generated by all departments.

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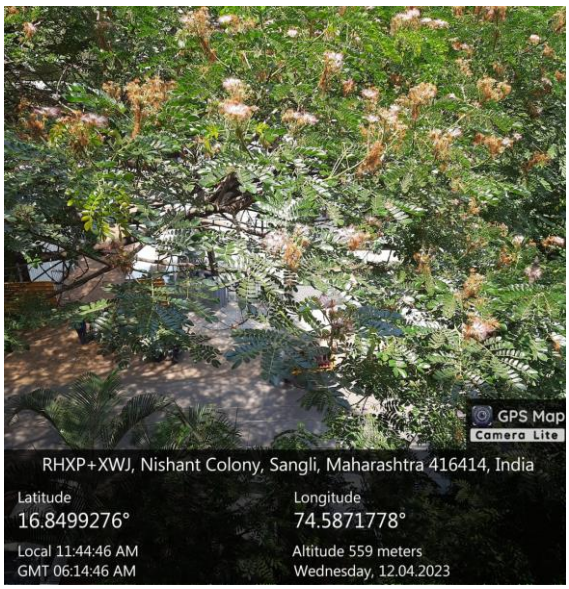
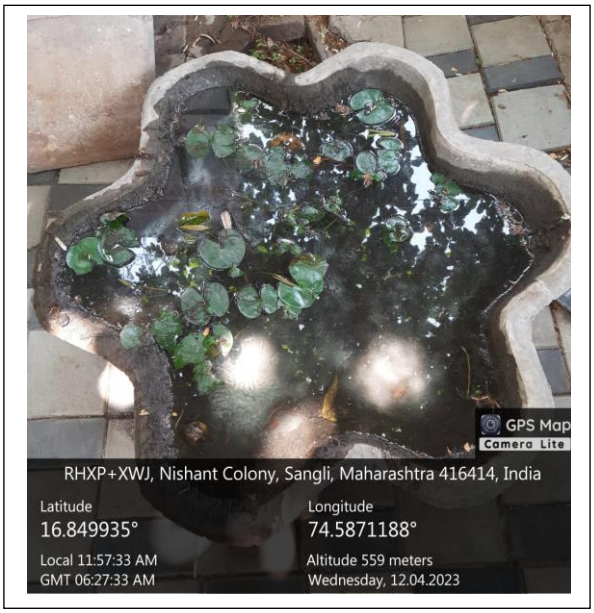
10. BEST PRACTICES FOR ENVIRONMENT

1. **Biodiversity Conservation:**

♣ They have green campus which provides habitat to various species.

♣ They maintain flora and fauna in the campus.





2. **Tree Plantation Drives and Days Celebrations**

♣ Periodically the plantation drives conducted by students and staff of campus.

♣ Every Guest is honored by tree at campus.

♣ World Environment Day, Krushi Din etc. celebrated by students and staff every year.

♣ College has Eco Club.

♣ To create awareness among the society they conducted so many programs like awareness rally for Environment.




3. Solid Waste Management

- ♣ Different mechanisms for proper disposal of biodegradable, non-biodegradable and MSW are implemented in campus.
- ♣ Cleanliness drives and awareness programs are arranged by college.
- ♣ Drafting tables used in college are made from bagasse.
- ♣ Empty paint buckets are used for tree plantation.

4. Water Conservation

- Water saving push taps fitted in the drinking water zone and the toilets to avoid the wastage of water.
- Drip irrigation system is applied through the campus for watering plants, and it saves water.
- Sign boards for awareness of environment are there in the campus.

11. OVERALL RECOMMENDATIONS

- Formation of Environment Policy and communicated to all faculties and other staff members.
- Environmental Monitoring i.e. (Ambient Air Quality monitoring, D.G set monitoring, Water monitoring) need to be conducted by approved laboratory with frequency of six month.
- Reduction in use of paper work by go digital system.
- Need of installation of roof top solar panels.
- Increase in Environmental promotional activities for spreading awareness at campus.
- As practically feasible avoid use of personal vehicles inside the campus.

12. CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The Appasaheb Birnale College of Architecture has Environmental Committee for sustainable use of resources. The audit has identified several observations for making the campus premise more environmental friendly. The recommendations are also mentioned with observations for campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. The paperless work system, green campus management, solid waste management, rain water harvesting system, composting method and water conservation practices are noteworthy.

As part of green audit of campus, we carried out the environmental monitoring of campus which includes Illumination, Noise level, Ventilation monitoring and Water Testing which is used for drinking purpose in the campus. It was observed that Illumination and Ventilation is adequate considering natural light and air velocity present. Noise level in the campus is well within the limit i.e. below 65 dB at day time. Drinking water also analyzed and found it was potable.

There are some major observations like installation of solar panels are necessary. And few minor things are important to initiate urgently are waste management records by monthly inventory, water balance cycle and periodic inspection of buildings housekeeping and environment policy.

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