

Green Audit Report

JSS Law College

Autonomous

Affiliated to Karnataka State Law University, Hubballi
New Kantharaje Urs Road, Kuvempunagar, Mysuru-570 023
Karnataka, INDIA
<https://www.jsslawcollege.in/>



Prepared by



Department of Environmental Engineering

Sri Jayachamarajendra College of Engineering
JSS Science and Technology University
JSS Technical Institutions Campus, Mysuru – 570 006



July 2022

REPORT ON GREEN AUDIT

JSS MAHAVIDYAPEETHA

JSS SCIENCE AND TECHNOLOGY UNIVERSITY

SRI JAYACHAMARAJENDRA COLLEGE OF ENGINEERING



JSS
SCIENCE AND
TECHNOLOGY
UNIVERSITY
MYSURU

- Constituent College of JSS Science and Technology University
- Approved by A.I.C.T.E
- Governed by the Grant-in-Aid Rules of Government of Karnataka
- Identified as lead Institution for World Bank Assistance under TEQIP Scheme



Date: 30.07.2022

DEPARTMENT OF ENVIRONMENTAL ENGINEERING

CERTIFICATE

This is to certify that the Department of Environmental Engineering, SJCE, JSS Science and Technology University, Mysuru has conducted detailed "Green Audit" of JSS Law College, New Kantharaje Urs Road, Mysuru, for the years 2020-2022. This Green audit includes assessment of planning, efforts and actions implemented by the College with respect to the management of water, wastewater, solid waste, energy, greenery, student involvement, etc. as well as providing suggestions on strategies that the College can follow to minimize its adverse impacts on the environment. In an opinion, our observations, and to the best of the information given to us, the said green audit gives a true and fair view of the green initiatives for maintenance of eco-friendly campus.

Green Audit Assessment Team

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Dr. Pushpa Tuppad, *Associate Professor*

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Preface

Institutional self-inquiry is a natural and necessary outgrowth of quality of higher education. Concern about environmental degradation and realization of values of the environment are logical consequences of research, teaching and learning process. In its pursuit for improving environmental quality and to maintain a pristine environment for the future generation of students, JSS Law College, New Kantharaje Urs road, Mysuru, has made a self-inquiry on environmental quality of the campus with the following objectives:

- To establish a baseline of existing environmental conditions with focus on natural and physical environment in the institution.
- To understand the current practices of sustainability in the institution with regards to - the use of water and energy –green environment – water and waste management – solid waste management, etc.
- To promote environmental awareness in the institution through participatory auditing process.
- To create a report on document baseline data of good practices and provide future strategies and action plans towards improving environmental quality in the institution.
- To encourage pro-active participation of students and staff of the institution in environmental awareness and sustainable development.

This report is prepared by the green audit assessment team of the Department of Environmental Engineering, Sri Jayachamarajendra College of Engineering, JSS Science and Technology University, Mysuru. As there was no standard model for such an environment/green audit for colleges/institutes, the green audit team brainstormed and evolved a questionnaire survey to be filled by the institution (i.e. JSS Law College, New Kantharaje Urs Road, Mysuru.) that will help in understanding the activities/initiatives taken up in the institution towards environmental conservation and sustainability. The audit team has made short term and long term suggestions to take environment protection to higher levels and it is hoped that this will receive due attention of the Institution authorities as well as all the stake-holders of the institution.

Green Audit Assessment Team

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CHAPTER- 1

1. INTRODUCTION

1.1 GENERAL

Green audit is the process of assessing the environmental impact of an organization, process, project, product, etc. It involves systematic identification, quantification, recording, analysis and reporting of components of environmental diversity of various establishments. Green audit can be a useful tool for an institution to determine how and where they are using water, energy or other natural resources, how much waste water and solid waste is being generated; the institution can then consider how to implement changes and make savings by protecting the environment. Green audit can create health consciousness and promote environmental awareness besides enhancing values and ethics in the educational institutions. It provides staff and students a better understanding of Green impact on and off the campus. If self-assessment is a natural and necessary for quality education, it could also be stated that institutional assessment is a natural and necessary outgrowth of quality educational institution. Thus, it is imperative that the institutes become proactive in evaluating their own contributions towards 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. It is also necessary to conduct green audit in college campus because staff and students become aware of the green audit process and its advantages, understanding of which will certainly lead to actions and initiatives to save the planet. Nurturing our environment is one of the key characteristics of good citizens of our country. The aim of green audit is to help the institution to set environmental examples for the community and to educate the young learners. Green audits may indirectly provide opportunities for educational institutes to impart knowledge of sustainability to staff and students through the tasks/initiatives at institute/community level and aid in implementation of sustainable development goals mainly SDGs 6 (clean water and sanitation), 7 (affordable and clean energy), 13 (climate action) and there by achieving SDG 11 (sustainable cities and communities) in a long run.

The National Assessment and Accreditation Council (NAAC), New Delhi, which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation, NAAC has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit report. Without NAAC accreditation, universities and colleges are not eligible for UGC grants, RUSA grants, financial aid, etc. Institutes with top NAAC grades such as 'A++', 'A+' and 'A' are most sought-after institutes by students and employers alike, as they offer high-quality education. Green Audit is assigned to the Criteria 7 of NAAC.

1.2 STAGES OF GREEN AUDIT

Pre-Audit:

- Plan the audit
- Select the audit team
- Acquire the background information
- Visit the site

During Audit Process on Site:

- Understand the scope of audit
- Verify/evaluate, both acquired information through questionnaire survey and onsite observations
- Prepare a report of the observations and recommendations

Report Preparation:

- Produce a draft report of the data collected and potential recommendations
- Produce a final report of the observations and the inference with accuracy
- Prepare an action plan to overcome the limitations/challenges
- Distribute the final report to the management
- Keep an internal watch on the action plan

1.3 BENEFITS OF GREEN AUDIT

There are many advantages of effective enforcement of green audit in the institutions/colleges. Green audit -

- Helps to shield the environment with more efficient resource management.
- Recognizes the cost saving methods through waste minimization and proper management strategies.
- Points out prevailing and forthcoming complications.
- Authenticates conformity with the implemented laws.
- Empowers the organizations to frame better environmental performance.
- Enhances the alertness for environmental guidelines and duties.
- Imparts environmental education through systematic environmental management, approach and improves environmental standards.
- Provides benchmarking for environmental protection initiatives.
- Assures financial savings through a reduction in resource use, development of ownership, personal and social responsibility for the College and its environment.
- Results in enhancement of college profile.
- Develops environmental ethics and value systems in youngsters.

On this background it becomes essential to adopt Green Campus policies in the institutes leading to the overall sustainable development. Policies of this nature include the adoption of sustainable, more efficient technologies, rebate programs or education campaigns. Eco-campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use and conservation, promote personal action, reduce the institute's water consumption, reduce wastes to landfill, and integrate environmental considerations into all contracts and services considered to have significant environmental impacts. Target areas included in this green auditing are water, energy, waste, green cover and carbon footprint.

1.4 ABOUT THE INSTITUTE:

JSS Law College, New Kanthraje Urs Road, Mysuru, is established in 1982 under the aegis of JSS Mahavidyapeetha, Mysuru. It is the first law college in the country to become autonomous institute and has been recognised by the Bar Council of India. The college spans over a lush green area of 2.5 acres (Table 1).

The college offers a total of 4 programs B.A, LL.B (Hons), B.B.A, LL.B. (Hons), LL.B, LL.M., under the category of UG and PG law courses. The college has well equipped class rooms, moot court hall, library, office rooms, play ground with flag post, gymnasium/fitness facilities for students, boys' and girls' rest rooms, shared playground (MOU with JSSSTU, Mysuru), and parking area for two wheelers & four wheelers.

Vision:

JSS Law College strives to create a community of committed professionals who are competent to solve legal and social problems, to promote justice, and be compassionate members of the society.

Mission:

JSS Law College provides a scholarly ambience in which students learn, in and outside the class room, to become outstanding legal professionals and leaders who serve the profession and society. We are committed to the dual goals of access and excellence by creating a welcoming and vibrant educational community that is rich in diversity in all of its varied forms, and by offering students the fullest opportunity to participate and experience through flexible and innovative programs.

The Mission is realised through

- Striving to instil in each student a sense of intellectual curiosity and commitment to life-long learning.
- Engaging with community and the academia at all levels of our work, including teaching, scholarship, public service and public policy.
- Awakening students by providing an opportunity to become conscientious leaders of the profession and the community.
- Developing professional judgment by academic exercises.
- Considering each member of the community as individual and as an integral part of education.
- A curriculum to promote the holistic growth of students and make them complete persons.
- Recognizing outstanding teachers and mentors.

Internal Quality Assurance Cell (IQAC)

Quality enhancement is a continuous process. The internal quality assurance cell (IQAC) will become a vital part of the institution's quality assurance system and work towards ensuring quality enhancement and sustenance. The prime task of the IQAC is to act as a catalyst and develop a system for conscious and consistent improvement in the overall performance of its institution. For this, during the post-accreditation period, institutions need to channelize their efforts towards promoting holistic academic excellence including the implementation of the peer team's recommendations. The establishment of the IQAC is the first step towards institutionalization and internalization of quality enhancement initiatives. Its success depends on its sense of belongingness and participation in all the activities of the institution. It is aimed that the IQAC has to play pivotal role in each and all aspect of higher educational institutions. Thus, IQAC was established in [JSS Law College](#) in the year 5th July 2005, with the vision to promote quality culture as the prime concern.

IQAC will take necessary measures in [JSS Law College](#) to organize various quality improvement programmes for better teaching and learning processes. The teachers are assisted financially and encouraged to participate in various professional development activities in and outside the college. Besides, several online and offline activities have been conducted for the benefit of students, teachers and non-teaching staff. Some of the programmes are on the key areas of Skill development and Entrepreneurship, IPR, Research Methodology, Best practices in online teaching, Orientation and retraining programmes, administrative training programmes etc. IQAC is contributing constantly for the betterment of environment in the college premises by creating awareness on various aspects such as energy saving, non-usage of plastic, generating little or no wastes etc. IQAC has the practice of preparing the action plan for Green audit, energy audit and to maintain sustainable environment in the premises.

Accreditation:

The college has undergone assessment & accreditation by NAAC and in the Cycle 1 accredited with B+ grade with 78% CGPA in 2004, Cycle 2 re-accredited with 'A' grade in 2012 (CGPA 3.10), Cycle 3 re-accredited in 2018 (CGPA 2.41) In the academic year 2016-17, the College was recognized by UGC as 'College with Potential for Excellence' for the period of 5 years.

Table 1: Area coverage of the college

Type	Area (acres)
Campus area	2.05
Total plinth area of buildings	0.406
Total green cover	0.145

1.5 NAAC GRADING IN ASSESSMENTS

With the privatization, widespread expansion, increased autonomy and introduction of Programmes in new and emerging areas have improved access to higher education in several institutes and colleges. This has also led to widespread concern on the quality and relevance of the higher education. To address these concerns, the National Policy on Education (NPE, 1986) and the Programme of Action (PoA, 1992) spelt out strategic plans for the policies, advocated the establishment of NAAC. The mandate of NAAC as reflected in its vision statement is in making quality assurance an integral part of the functioning of Higher Educational Institutions (HEIs).

1.6 CAMPUS INFRASTRUCTURE

Library

The library at [JSS Law College Mysuru](#), serves the information needs of faculty and students. The library has carpet area of 458 square meters or 4928 sq ft and it is spread over two floors with the ground floor and first floor having seating capacity of 130 persons respectively. Library has subscription to 5 Databases having E-Journals and E-books. Library also has subscription to print journals and general magazines.

Athletics & Fitness

The College has two Multi Gyms, separate for men and women, working from 6:00 am to 9:00 am in the morning session and 4:30 pm to 7:30 pm in the evening.

Training is given both for fitness and sports.

Training for general fitness:

1. **Cardio-respiratory Endurance Exercises** : Running, Cycling, Skipping
2. **Muscular Strength Exercises:** Weight lifting Training - Squat, bench press, dead-lift, lifting weights.
 - Working with resistance bands
 - Heavy gardening, such as digging and shovelling
 - Climbing stairs

- Cycling
- Push-ups, sit-ups and squats
- 3. Muscular Endurance Exercise:**
 - Squats
 - Push-ups
 - Planks
 - Rows
 - Lunges
 - Chest press
 - Shoulder press
 - Biceps curls
- 4. Flexibility Exercise:**
 - Standing Hamstring Stretch (Standing Trunk Hamstring Flexion)
 - Triceps Stretch
 - Butterfly Stretch
 - Seated Shoulder Squeeze (Flexibility / Shoulders Chest Stretching)
 - Side Bend Stretch
 - Knee to Chest Stretch Buttocks Hip Flexibility
 - Standing Quad Stretch
 - Knees to Chest

Training for Sports related fitness:

- Agility
- Balance
- Co-ordination
- Power
- Reaction Time
- Speed

Arts and Culture

The college proudly promotes cultural programmes to foster a distinctive identity of their own and to sensitize towards our rich cultural inheritance.

The NSS Wing

The NSS wing of JSS LCour college organizes a number of green initiatives spread throughout the academic year. To list out some of the programmes, the NSS coordinator along with the volunteers conducts Swachh Bharat Abhiyan in and outside the campus. Every Saturday there is a cleaning drive in and around the campus. Plantation of saplings by inviting environmentalists and nature lovers is done as part of World Environment Day and other days of significance. The cleanliness and green initiatives is a regular part of the annual NSS camps by

cleaning the filth in lakes, construction of toilets, plastic free drives, etc in the village that is chosen for the camp.

The NCC (Air) Wing:

JSS Law College, Mysuru has an active unit of NCC Air wing of 2/4 KAR AIR SQN NCC, Mysuru, under the guidance and presence of our unfathomable ANO, Flying Officer (Dr.) N. Vani Shree. Students from the college, especially 'women' who are cadets of 4 KAR AIR SQN NCC have achieved innumerable laurels and have even reached the pinnacle of glory by representing India on both National and International levels.

The ANO and the cadets take active part in the green initiatives not only within the college campus but also programs like cleaning of lakes in and around Mysuru city, holding rallies and street plays to create environmental awareness, eco-friendly activities in various State and National level camps, celebrating significant days to support the nature like World Environment Day, World Wildlife Week, Vanamahotsava, etc.

CHAPTER -2

2.1 METHODOLOGY OF GREEN AUDITING:

Green audit is a management system tool used methodologically for the protection and conservation of environment and sustainable development. It can be adopted by any industry, organization, and institute and even by housing complex. The green audit is useful to detect and monitor sources of environment pollution and it emphasizes on management of all types of wastes, monitoring of energy consumption, monitoring of quality and quantity of water, monitoring of hazards, safety of stakeholders and the management of disasters (Patil et al., 2019).

The methodology includes three stages: pre-audit, audit and post audit. Pre-audit mainly included obtaining response to the questionnaire survey. Audit stage included review of the responses received through physical inspection of the campus, observations, discussion with the concerned authorities of the Institution. Post audit stage included data analysis and interpretation and proposing recommendations.

2.2 PRE-AUDIT STAGE:

A pre-audit meeting is important to establish the scope and objectives of the audit and the practicalities associated with the audit. As a first step of audit process, preliminary information with respect to initiatives/activities concerning green audit was collected through a questionnaire survey. This questionnaire was categorized into various sections including general information, water management, waste water management, energy management, solid waste management, green initiatives, carbon footprint, and occupational health and safety.

2.3 AUDIT STAGE

After the response was received for the questionnaire from the college (also referred to as auditee), a visit to the auditee's campus was scheduled. In this regard, the green audit assessment team (referred to as auditing team: Dr. Pushpa Tuppad, Ms. Savitha Ulavi, and Ms. Sahana M., Department of Environmental Engineering, Sri Jayachamarajendra College of Engineering, JSS Science and Technology University) visited the campus of JSS Law College, Mysuru.

The team met the Principal, Prof. S. Nataraju and actual planning of audit processes and all pertinent sectors were discussed with the Principal and staff-in-charge. Necessary records/documents were collected and verified to clarify the data received through survey and discussions. After the preliminary discussion, the audit team visited the Moot court hall, Auditorium, solar panels on the roof top, garden/landscape areas, waste segregation unit, hostel, facilities in cellar floor, etc., for visual observations and verification. Clarifications were sought over phone to collect additional information, wherever applicable. The information on student involvement with respect to green campus activities was collected from the staff in-charge.

Exit Meeting

Discussions were made with Prof. S. Nataraju, Principal and Dr. N. Vani Shree, IQAC and NAAC Coordinator regarding their policies and future plans on environmental management. Green audit assessment team members suggested several measures which will further improve the institution in terms of green campus strategies.

2.4 POST AUDIT STAGE:

Information collected was analysed and interpreted. A comprehensive green audit report was prepared and submitted to the college. On the basis of results of data analysis and observations, measures towards water conservation, wastewater management, solid waste management, energy conservation and health and safety concerns were recommended.

2.5 COMMITMENT OF THE COLLEGE MANAGEMENT

The management of the college has been pro-active in their commitment towards green auditing. They have been encouraging all green activities and willing to support more of such activities towards safeguarding Mother Nature, including awareness programs on the environmental conservation, planting trees on and off the campus, solid waste management, etc. The college looks into minute problems relating to solid waste by providing separate facilities for leaf litter, kitchen waste and food waste management.

CHAPTER- 3

3.1 STAFF INVOLVED IN GREEN AUDITING:

The following staff of JSS Law College, New Kantharaje Urs Road, Kuvempunagar, Mysuru, were involved in Green Auditing under the general supervision of Dr. S. Nataraju, Principal of the college.

Teaching Staff:

Dr. S. Nataraju, Principal

Dr.N. Vani Shree, IQAC and NAAC Coordinator

Sri. Madhu Kumar. R N, Faculty & Systems Manager

Non -Teaching Staff:

Sri. Muddumadappa, Office Superintendent

Mr. Madan, SDA

Sri. N Mahadev, Gardener

3.2 KEY FINDINGS AND OBSERVATIONS

3.2.1 WATER

- Main uses of water in the campus: Drinking, Garden, Cleaning, Toilets, Bathrooms, Hostel, Washing, Office uses.
- Sources of water: Bore well (~60%) and city corporation (~40%); utilization Per Day 10,000 Litres
- Number of bore wells: 1
- Bore well: 200ft deep, 2 inch yield
- No. of motors used for pumping: 02 (bore and sump: 8 HP and 5HP)
- Water storage: Sump (20,000 L Overhead tank (2 numbers with 16 KL capacity each)
- Approximate quantity of water pumped per day from sump to OHT is 16 KL
- Number of water taps in staff rooms, common areas and hostels: 15, 48, 72
- Number of water coolers: 03
- Number of RO units: 03
- Number of toilets in staff rooms, common areas and hostels: 06, 28, 20

- Water used for gardening/landscape: \approx 2,000 L/d
- Total quantity of water used in hostel: 11,000 L/d
- Total quantity of water used for other miscellaneous purpose: 2,000 L/d
- Lawn is watered by re-using excess water once in two days/as needed in non-summer days and every day in summer

Water storage tanks are cleaned three times in a year. Water distribution system is regularly monitored and maintained by in-house maintenance staff. No persistent water leakage has been reported. The staffs are aware that leaking taps should be immediately replaced to avoid wastage of water. Minor leakages are sorted out immediately by the in-house plumber or outsourced.

Rain water:

Campus has rooftop rainwater collection facility. However, the collected rainwater is let out of campus into city storm water drain. It was observed that, the campus has an issue with high groundwater table which seeps out. It was reported that this excess groundwater seeped into and flooded cellar and library during the rainy season. Therefore, this excess water is collected in a sump and unused water is pumped out to city storm water drain and also used for garden area.

It is suggested to regularly test the RO water quality to ensure its potability and reject water from RO unit to the garden area which can be used to water plants and lawn. It is also suggested to place more number of sign boards in prominent locations creating awareness on water conservation and its importance. Drip/sprinkler irrigation is adopted to water the garden/landscape and watering is done once in two days by re-using the excess water at the cellar area. There are water level controllers for bore wells and sumps through which water is conserved when not needed and the college regularly conducts activities to spread awareness and educate the staff and students on water conservation activities. Rupees 30,000.00 are spent for annual maintenance of greenery around the campus.

3.2.2 WASTEWATER MANAGEMENT

Major sources of waste water are toilets in academic areas and hostel. There is a provision of toilets for students and staff with special needs. Waste water generated in the campus is let into

underground sewage network system of Mysore City Corporation. No leakages are reported in the waste water collection pipelines.

3.2.3 ENERGY

- Sources of energy: Electricity, Solar and Diesel generators
- Number of diesel generators: 01 no. 30 KVA
- Number of LED lights: academic area–139; hostel area – 55, street lights – 09
- Expenditure on fuel for power generators: 5L per hour
- Number of Solar lamps: 01
- Number of fans: academic area–138; hostel area – 75
- Number of Air conditioners: academic area– 03 (star rating 03; runs approx. 01 hour per day)
- Number of Computers: 71, operating on an average of 2 hours/day
- Number of Printers: 11, operating on an average of 1 hour/day
- Number of Projectors: 15, operating on an average of 2 hour/day
- Number of Photocopiers: 05, operating on an average of 1 hour/day
- Number of Televisions: academic area –05; hostel area – 01
- Alternate source of energy: Solar water heater (54.93 KW)

Computers are set to power saving mode. Students and staff are instructed to switch off all electrical appliances when they are not in use. Electrical safety audit is carried out by Govt. electrical inspector every year. The institution intends to install sensor based lights and water taps and encourage paperless office administration in order to minimize paper usage.

Roof Top Solar Panels

The college has installed 84kW rooftop solar power which is used to feed the Campus load and export the remaining energy to Chamundeshwari Electricity Supply Corporation Limited, Mysuru. In the last 12 months (Jan 2021 to Dec 2021) the college has exported 91,972.5 kWh of power generated from solar grid. With this renewable energy harnessing initiative, the college is saving Rs 20,000 per month.

3.2.4 SOLID WASTE MANAGEMENT

- Types of solid waste generated in campus: paper waste, e-waste, garden waste, sanitary waste, food waste
- Number of collection bins: 32 small bins and 8 big bins

Table 2: Summary of solid waste generation in the campus

Sl. No.	Source	Non-biodegradable (dry)	Biodegradable (wet)	e-waste
1	Office	2.0 kg/month	-	0.5 kg
2	Hostel	2.0 kg/month	5.0 kg/month	-
3	Garden	-	3.0 kg/month	-

Campus is plastic free. Solid waste generated in campus is segregated at source; colour coded bins are placed at several locations in the premises. A crude compost unit (Appendix-2) exists to treat leaf litter. Campus has no kitchen and food preparation is outsourced. Paper and other non-biodegradable waste disposal is outsourced; taken by municipality. Also, collection and disposal of e-waste is outsourced to a third party by entering into an MOU.

Students are instructed to follow the guidelines of waste management. Placards on waste management are displayed in the campus. Institution encourages students to avoid the use of plastic files and folders for submission of assignments and seminar reports. Students are encouraged to participate in awareness camps for segregating solid wastes across campus under NCC & NSS wing.

3.2.5 GREEN INITIATIVES

- Garden area inside the college: 6300 ft² and maintained by the gardener
- The trees and plants species present in the campus include pongamiapinnata (07), Ashoka tree (24) Neem (01), Champaka tree (05), Guava (01), Ornamental plants (52), Drumstick tree (01), Teak (16), Jack fruit (01). Mango (01), Hibiscus (10), coconut (02). Lemon (03). Ferns (50), Anthorium (04), Coffee (02), Jasmine (01), Ornamental plants in pots.
- The percentage of green area, which includes any area which has grass cover, tree cover and horticulture (calculated using the following equation; MGNCRE, 2019) is 6.2%.

$$\text{The percentage of green area} = \frac{\text{Total green area in square meters}}{\text{Total area in square meters}} \times 100 \times 0.66$$

Scientific names of the plants and trees are displayed for a few plants/trees and it is recommended to follow the same for all dominant plants/trees for the purpose of education and awareness. Few selected medicinal plants such as Tulasi, Aloe vera, Indian Tinaspora (Amruth balli), Insulin plant are available in the campus. Besides, there are large trees across the campus giving much needed greenery and fresh oxygen. Compost produced in-house is used for the garden/landscape. In addition, urea and potash are used to fertilize the landscape. Connecting with nature is key to understand human dependence on nature and the need to preserve that precious resource. Several nature awareness programs have been conducted. There is an eco-club on campus called Green Guides, organizing activities including animal adoption, vanamahotsava, visits to pinjrapole and donating animal feed, observing no-vehicle day, bird feeding programs during summer, nature treks, etc. There is a number of nature awareness programs conducted on campus including Rally for Rivers, Wildlife photography exhibition, World Wildlife week celebrations, World Water Day celebrations, World Environmental Day etc. Institution has expressed terraced gardening and vertical garden ideas for improving green cover.

3.2.6 CARBON FOOTPRINT

- Number of persons using cycles: students 09
- Number of persons using two wheelers: Students ~ 250; Faculty: ~30, Visitors: ~05
- Number of persons using four wheelers: Faculty: ~06, Visitors: ~02
- Number of persons using public transport for commuting to Institute: students~ 200; Faculty ~ 03

3.2.7 OCCUPATIONAL HEALTH AND SAFETY

It is noted that the institution gives prime importance to health and safety of their students and staff. In order to improve health and safety, the students are advised by the college to follow the following instructions.

General Basic Rules/Safety Measures/Fire Safety

- a. Fire extinguishers are installed in each floor, office and cellar.
- b. Safety drills and first aid protocols to be followed in case of emergency are provided to students and staff.
- c. Safety drills are conducted for students explaining the measures, precautions and responsibility to be exercised during fire hazards.

3.2.8 ENVIRONMENTAL MANAGEMENT PLAN

- a. Annual expenditure incurred for Environmental Management Plan for the institution is Rs. 18 lakhs for cleaning and maintenance and Rs. 1.5 lakhs for gardening.

3.3 BEST PRACTICES

Green audit assessment team takes this opportunity to appreciate the efforts/initiatives taken by JSS Law College, Mysuru, towards environmental conservation and protection. The college has a thoughtfully crafted Clean and Green Campus policy in place. The college has undertaken many significant initiatives and has reaped successful outcomes as far as water conservation, harnessing of solar energy, maintenance of green cover in campus, and active involvement of the students and staff with the able support by the management in spreading awareness of environmental conservation and the message that it is the prime responsibility of every citizen of our country to safeguard our environment. Documents in support of operation and maintenance of facilities/utilities and the picture gallery of various initiatives can be found in Appendices (Appendixes 1 to 8) of this report.

3.4 CONCLUSION AND RECOMMENDATIONS

Keeping in view the aims and objectives of green audit in academic institutions, the green audit assessment team conducted the green audit for JSS Law College, Mysuru, Karnataka, India. The green audit efforts assist the process of identifying the activities taken up by the institute as well as in developing future strategies towards a sustainable environment. The results presented in the green auditing report will serve as a guide for educating the college community on the existing environment related practices and resource usage on campus as well as generate action plan for new activities and innovative practices. A few recommendations are proposed to better manage water and waste using eco-friendly and sound scientific techniques. This may lead to the prosperous future in context of Green Campus and thus sustainable environment and community development.

The green audit report is a very powerful and valuable communication tool to use when working with various stakeholders who need to be convinced that things are running smoothly and systems and procedures are coping with natural changes and modifications that occur. Selected photographs of the team visit are presented in **Appendix-8**.

Common Recommendations

- Establish a purchase policy for environmental friendly materials/appliances.
- Conduct more seminars and group discussions for students to enhance environmental education.
- Students and staff should be encouraged to identify and address local environmental problems.
- Establish water, waste and energy management systems.
- Sustain the celebrations of World Environment Day, World Water Day, World Earth Day, Ozone day and others in an effective way.
- Increase the number of display boards highlighting water and energy conservation.
- Faculty members and senior students could educate the freshers' about the location of and how to use all safety and emergency equipment (e.g. first-aid kit, fire extinguishers) during orientation/induction program.

3.5 CRITERIA WISE RECOMMENDATIONS

3.5.1 WATER

- Leakages from taps and tanks should be reported and attended immediately. At the time of replacement, replace the existing taps with water saving taps.
- Install display boards to control over exploitation of water and save water.
- Water the garden judiciously.
- Have dedicated staff for water inspection and maintenance.
- Measure the amount of groundwater drawn from bore wells and regularly monitor the water quality.
- Conduct more programs/workshops on water conservation at regular intervals and ensure active participation of students and staff.
- As an outreach activity, take up renovation of traditional and other water bodies/tanks.

3.5.2 ENERGY

- Conduct more programs on energy conservation at regular intervals and ensure active participation of students and staff.
- Replace computers and TVs with LED monitors.
- Observe a power saving day every year.

- Automatic power switch off systems may be introduced.
- Purchase of energy saving equipment with high energy efficiency star ratings.

3.5.3 SOLID WASTE

- Ensure total plastic free practice in campus.
- Avoid single use plastics for all functions/ events in the institution.
- As per Central Pollution Control Board (CPCB) Implementation Guidelines for E-Waste (Management) Rules, 2011 and 2016, the college coming under higher educational institutions category, has to maintain records on e-waste generated and should be channelized to registered/authorized collection centres/recycler/dismantler. It is recommended that the e-waste generated on campus must be collected and outsourced to the Karnataka State Pollution Control Board (KSPCB) authorised collectors.
- Any hazardous/medical waste generated in campus has to be disposed off as per the Bio-medical Waste Management Rules, 2016 of CPCB.

3.5.4 GREEN CAMPUS

- The motto behind celebrating environment day (such as, World Wetland Day – Feb 2; World Water & Sanitation Day – Mar 22; World Earth Day – Apr 22; World Environment Day – Jun 5; World Water Monitoring Day – Sept 18), must be a routine practice
- Beautify the college building with indoor plants.
- Plant indigenous variety.
- The watering method also influences evaporation rates. Fine sprays and high trajectories result in high levels of evaporation; large droplets and low trajectories minimize evaporation. Sprinklers need to be carefully placed to provide even application rates so that areas of over watering and under watering are avoided, and to avoid watering paved surfaces.
- Strengthen the registry of flora on campus.
- Revive activities of nature club / eco club for making campus more green
- Conduct competitions for making students more interested in taking active part and making the campus green.

- Undertake more events to spread awareness of cleanliness and nature conservation in schools nearby as part of the institutional social responsibility.
- Conduct awareness activities on environmental conservation for the citizens and school/college children in and around Mysuru.
- Establish a herbal/medicinal garden to improve awareness of Indian traditional house remedies for common ailments.

3.5.5 CARBON FOOTPRINT

- Encourage a system of car-pooling among the staff to reduce the number of four wheelers coming to the college.
- Encourage students and staff to use cycles.
- Discourage the students using two wheelers for their commutation.
- More use of generators every day should be discouraged.

3.5.6 CAMPUS SAFETY

- Conducted of fire safety drill for all faculty and staff to be sustained.

3.6 EXIT MEETING

Site visit by the audit team was concluded by the exit meeting. General and some specific feedback were given based on the observations made during the day. The initiatives already taken by the institution towards various aspects of environmental management was appreciated. Scope for improvement was identified and discussed with the authorities of the institution.

Acknowledgements

The Audit team from the Department of Environmental Engineering, Sri Jayachamarajendra College of Engineering, JSS Science and Technology University, Mysuru is thankful to the Principal and his team at JSS Law College, Mysuru, for entrusting Green audit services with us. The audit team whole heartedly acknowledges the hospitality, coordination and cooperation provided by the authorities and support staff of JSS Law College, Mysuru.

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Appendix – 1

Photographs of the general observations regarding water conservation initiatives at JSS Law College, Mysuru.

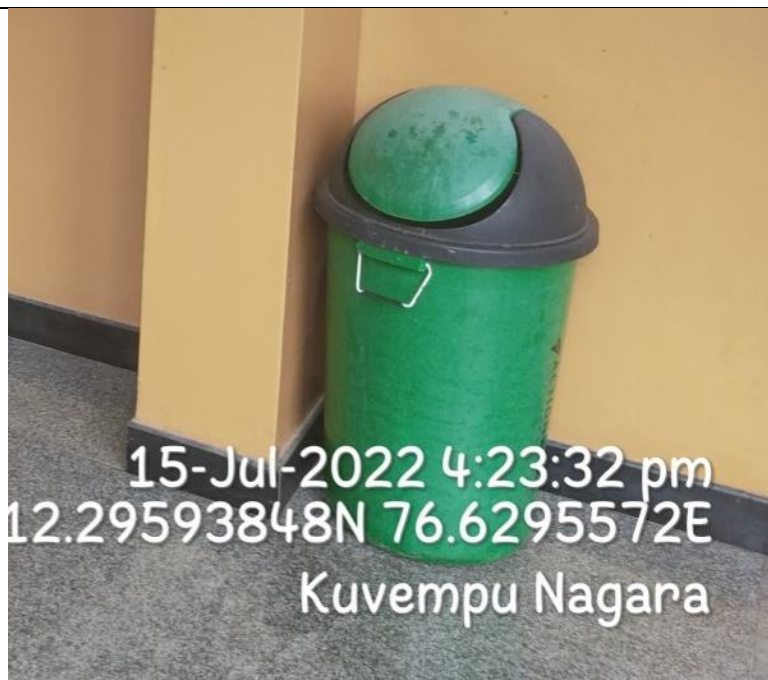




Roof top rainwater harvesting infrastructure

Appendix – 2

Photographs of the solid waste management at JSS Law College, Mysuru.



Colour coded waste collection bins on campus



Onsite waste segregation unit on campus

Appendix – 3

**Photographs of the energy conservation and harnessing of solar energy initiatives at JSS
Law College, Mysuru**



Rooftop solar panels installed

Appendix – 4

Photographs of the green cover at JSS Law College, Mysuru



Plant with scientific name display



Plant with scientific name display



Well manicured lawn in the college campus quadrangle



Well manicured lawn in the college campus quadrangle

Appendix – 5

Activities by NSS and NCC wings at JSS Law College, Mysuru

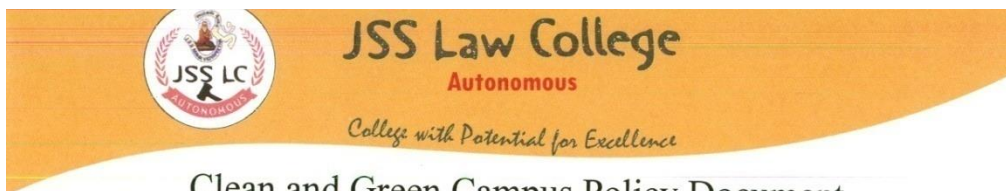






Appendix – 6

Clean and Green campus policy document



Clean and Green Campus Policy Document

About the College:

JSS Law College, a professional autonomous college functioning under the aegis of JSS Mahavidyapeetha, was established in the year 1982. College has been recognized by UGC as "College with Potential for Excellence". Since its inception it is striving to search for innovative methods in imparting legal education. It has been able to establish itself as one of the best law colleges.

JSS being a philanthropic institution tries to bring in the best out of an individual and this can be made possible through Man's blend with nature. Nature being the first teacher lavishes us with utmost care, caressing us in her comfort couch throughout. Hence it's the responsibility of every one of us to protect the eco system and make it a better place for generations to come. In tune with the institutional vision and mission the college has adopted a policy to cater the green initiatives. This policy envisions programmes on environmental consciousness and the college endeavours to conduct green initiatives in tune with the policy. The college tries to create awareness amongst the students about our ecosystem and thereby reaching the masses at large through various green activities within and outside the campus.

The college strives to create a clean, green and hazard free environment that creates a zeal and commitment amongst its stakeholders. All necessary care and precautions are taken to instil in them the values of maintaining and sustaining the ecosystem.

The Clean and Green Campus Policy

The Green Campus Policy of the college envisages a Clean and Green Campus where environmental friendly practices and education combine to promote sustainable and eco friendly practices within and beyond the campus. It also redefines the personality of the staff and students by instilling in them the ethical utilization of environment, thus redefining the environmental culture.

Mission

To create an environmental initiation amongst the stakeholders and masses to come out with eco friendly ideas to protect our ecosystem from plastic abuse, pollution, ozone depletion, etc in order to hand over a safe and secure environment for the future generations.

Objectives

1. To bring about a healthy lifestyle.
2. To create an awareness about the importance of safe and healthy environment.
3. To sensitise the stakeholders on minimal use of plastic.
4. To organise vehicle free day

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5. To organise talks, workshops, rallies, street plays, surveys seminars, etc. on the various topics concerning conservation of nature.
6. To promote eco friendly practices.
7. To advocate students regarding ethical use of natural resources.
8. To organise Mobile (cell) free day.
9. To promote planting of trees.
10. To organise competitions reflecting sustainable environment.

Initiatives Taken to Implement the Clean and Green Campus Policy

The Institution is committed to managing its campus in accordance with its Clean and Green Campus Policy by establishing the following infrastructure and carrying out the following activities:

1. Landscaping with Trees and Plants
2. Ban on Single-Use Plastic
3. Observance of vehicle free day to restrict the Use of Petrol/Diesel Vehicles
4. Solar panels
5. Use of LED Bulbs/Tubes and Power Efficient Equipments
6. Solar Water Heater in the Girls' Hostel
7. Solid Waste Management
8. Water Management
9. E-waste Management
10. Display Boards to Promote Environmental Sensibility on College Campus
11. Observance of Days to protect and Nurture Environment
12. The Green, Environmental and Energy Audit
13. Dedicated group of volunteers 'Green Guides' and 'Rotaract Club' to conduct awareness drives on Environment Consciousness
14. Mobile free day.
15. Planting of saplings
16. Survey on minimal use of electricity.
17. Landscaping of trees and plants.
18. Regulated use of water

The Green, Environmental and Energy Audit

The Green, Environmental Audit of the college was done by the Environmental Science Department, SJCE College, Mysuru and Energy Audit was done by the Electrical Department, SJCE College, Mysuru.


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ACTION PLAN FOR GREEN AUDIT, ENERGY AUDIT AND TO MAINTAIN SUSTAINABLE ENVIRONMENT IN THE PREMISES (2022-23)

The following are the proposed activities for the academic year 2022-23 to maintain a sustainable and eco-friendly campus.

1. To minimise use of paper through online submissions, emails and other electronic modes.
2. Re-use of paper which is used one side.
3. Promotion of E-banners to avoid flexes.
4. To continue Adoption of Animals (Zoo Authority) and to encourage the stakeholders to celebrate their birthdays/anniversaries through adoption and donation for environmental causes.
5. To replace bouquets with plants.
6. Create awareness on "Save Soil".
7. To hold Role-play, rallies, Street dramas, awareness programs, workshops etc. For the preservation of the nature.
8. To encourage gardening and planting of saplings.
9. To develop a medicinal garden in the campus.
10. To make the campus Plastic Abuse Free Zone.
11. To encourage the stakeholders to use eco-friendly bags, handkerchiefs in place of tissues, cotton sanitary napkins, carry steel water bottles etc.
12. To install censor taps, censor lights, wherever feasible.
13. To minimise the use of generators.
14. To install auto-starters for conservation of water.
15. To encourage the stakeholders to use bicycles, Electric vehicles, pooling of cars, public transport, walking to reduce pollution and save fuel.
16. To ascertain the institutional social responsibility through services of the NCC & NSS volunteers with regard to cleanliness and environmental awareness drives,
17. To install Sanitary Napkin Dispensers.
18. To promote vertical gardening and indoor gardening.
19. To put boards creating awareness on conservation of water, soil, energy, thereby contributing to a sustainable environment for the future generations.
20. To continue observance of days of importance pertaining to environment.


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Appendix – 7

Safety measures (laboratories and campus, in general) and conservation awareness placards in campus of JSS Law College, Mysuru





Appendix – 8

The Audit team visit to the campus of JSS Law College, Mysuru







Audit team with the faculty and staff of JSS Law College, Mysuru