

Affiliated to Karnataka State Law University, Hubballi Recognized by Bar Council of India, New Delhi (NAAC Accredited B⁺⁺ CGPA 2.9)

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Metric No: 7.1.6: Quality Audits on Environment and Energy are regularly undertaken by the institution

Green Audit/ Energy Audit/ Environmental Audit Reports

2023-2024



SHRI DHARMASTHALA MANJUNATHESHWARA LAW COLLEGE CENTRE FOR POST GRADUATE STUDIES AND RESEARCH IN LAW MANGALORE 575003

> GREEN AUDIT REPORT 2023-2024

Website: https://sdmlc.ac.in

E-mail: sdmlaw@gmail.com



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Website: https://sdmlc.ac.in

E-mail: sdmlaw@gmail.com

Contact No: 0824-4294360/ 2494236

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1. Introduction

SDM Law College, Centre for Post Graduate Studies and Research in Law, Mangaluru 575003 was established in the year 1974 as the brainchild of Padma Vibhushan Dr D Veerendra Heggade, offering 5 years BA.LLB, BBA.LLB and 3 years LLB courses affiliated to Karnataka State Law University, Hubballi and Recognized by the Bar Council of India. Centrally located in the heart of this coastal city, the campus ensures compliance of environmental sensitivity through various green initiatives. To confirm the same, a green audit report has been prepared and authenticated by an external auditor.

Vision Statement of the College

"To impart holistic knowledge of law and mould students to be competent legal professionals, committed to the cause of community development through sustained academic activities and research thereby promoting empowerment through legal education for building ethical society".

Mission Statement of the College

- · Learner centred education of excellence
- Strong community interaction
- · Professionalism in education and service
- Efficiency, quality, continuous improvement and innovation in all the processes of our system
- Develop adaptability skills to meet the challenges of changing times

The student and faculty strength of the college is listed below:

Title	Male	Female	Total
No. of Students	362	688	1050
No. of Teachers	13	22	35
No. of Non- Teaching Staffs	14	09	23

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Physical Infrastructure

The built-up area of the college is 4066 Sq.Mts

2	
1	
1	
1	
1	
1	
14	
	1 1 1 1 1



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2. Objectives of Green Audit

The objective of the Green Audit is to assess the environmental quality and the management strategies being implemented in.

The specific objectives are:

- 1. To document the greenery of the campus
- 2. To monitor the energy consumption pattern of the college
- 3. To evaluate the waste management system
- 4. To impart environment management plans to the college
- 5. To provide a database for corrective actions and future plans.
- To assess whether extracurricular activities of the institution support the collection, recovery, reuse, and recycling of solid wastes.
- To identify the gap areas and suggest recommendations to improve the Green Campus status of the college.

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3. Target Areas of Green Auditing

Green audit forms part of a resource management process. Although they are individual events, the real value of green audit is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. Eco-campus concept mainly focuses on the efficient use of energy and water, minimize waste generation or pollution and economic efficiency.

All these indicators are assessed in the process of "Green Auditing of this educational institute". Eco- campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promote personal action, reduce the institute's energy and 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 green campus, energy, waste, and carbon footprint.

Auditing for Green Campus Management

Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere and release it as oxygen. The amount of oxygen released by the trees of the campus is good for the people in the campus. So, while you are busy studying and working on earning those good grades, all the trees in campus are also working hard to make the air cleaner for you.

Auditing for Water Management

Water is a natural resource; all living organisms depend on water. While freely available in many natural environments, in human settlements potable (drinkable) water is less readily available. Groundwater depletion and water contamination are taking place at an alarming rate. Hence, it is essential to examine the quality and usage of water in the college. Water auditing is conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse.

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Auditing for Energy Management

Energy conservation is an important aspect of campus sustainability which is also linked with carbon footprint of the campus. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices.

Auditing for Waste Management

Huaman activities create waste, and it is the way these wastes are handled, stored, collected and disposed of, which can pose risks to the environment and to public health. Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. Solid waste can be divided into three categories: bio-degradable, non-biodegradable and hazardous waste. Bio-degradable wastes includes food wastes, canteen waste, wastes from toilets etc. Non-biodegradable wastes include what is usually thrown away such as plastics, tins and glass bottles etc. Hazardous waste is waste that is likely to be a threat to health or the environment like cleaning chemicals, acids, and petrol. Unscientific management of these wastes sugness dumping in pits or burning them may cause harmful discharge of contaminants in social and water supplies and produce greenhouse gases contributing to global climate analysis respectively. Special attention should be given to the handling and management of hazardous waste generated in the college. Bio- degradable waste can be effectively utilized for energy generation purposes through anaerobic digestion or can be converted to fertilizer by composting technology. Non-biodegradable waste can be utilized through recycling and reuse. Thus, the minimization of solid waste is essential to a sustainable college. The auditor diagnoses the prevailing waste disposal policies and suggests the best way to combat the problems.

Auditing for Carbon Footprint

Burning of fossil fuels (such as petrol) has an impact on the environment through the emission of greenhouse gases into the atmosphere. The most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide, and ozone. Of all the greenhouse gases, carbon dioxide is the most prominent greenhouse gas, comprising

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402 ppm of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's
atmosphere through human activities is commonly known as carbon emissions.
Vehicular emission is the main source of carbon emission in the campus, hence, to assess
20 W
the method of transportation that is practice in the college is important.

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4. Methodology Adopted

The methodology adopted to conduct the Green Audit of the Institution had the following components.

Onsite Visit

Two days visit was conducted by the Green Audit Team. The key focus of the visit was on assessing the status of the green cover of the Institution, their waste management practices and energy conservation strategies etc.

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5. Green Audit Report

The plants planted in the college campus:

SI.No.	Species	No.	Habit	Family
01	Tectona grandis L.f.	1	Tree	Lamiaceae
02	Terminalia catappa L.	8	Tree	Combretaceae
03	Mangifera indica L.	1	Tree	Anacardiaceae
04	Psidium guajava guava	1	Tree	Myrtaceae
05	Sizygium cumini (L.) Skeels	1	Tree	Myrtaceae
	Plants planted in Pots	A LANGE CHAIR		
01	Caladium bicolor (Aiton) vent.	Araceae MANGAL		
02	Coleus aromaticum Benth.	Lamiaceae 10 1845		
03	Hibiscus rosa - sinensis L.	Malvaceae		
04	Cymbopogon citrates (DC.) Sta	Poaceae		
05	Aloe vera (L.) Burm.f.	Lilliaceae		
06	Rosa indica L.	Rosaceae		
07	Allamanda cathartica L.	Apocynaceae		

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08	Ficus elastic Roxb. ex Hornen	Moraceae
09	Ixora coccinea L.	Rubiaceae
10	Ocimum tenuiflorum L.	Lamiaceae
11	Lawsonia inermis L.	Lythraceae
12	Plumeria rubra L.	Apocynaceae
13	Catharanthus roseus (L.) G.Don	Apocynaceae
14	Lantana camara L.	Verbenaceae
15	Centella asiatica	Apiacae

Routine Green Practices

The college observed World Environment Day in the campus. The focus of these programmes was to provide awareness to the students about the importance of the environment, its conservation and sustainable use of environmental resources. The programs were conducted through guest lectures, poster competitions etc.

A fishpond is also being maintained in the campus with aquatic plants and fishes.

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Energy Audit Report

The below table shows the energy consumption pattern of the college for a month. The college has consumed an average of 2544 kW/hr electricity in a month and the one-year electricity bill amount was Rs. 5,59,224/-

SI. No	Electri cal Applia nces/ Instru ments	No.	Power (W)/u nit	Total Power (W)	kW	Opera tion/d ay	kW/hr	No. of days in month	Total Consu mptio n per month
2.	Tube LED Bulb	90	9	3420 990	0.99	4	13.68 3.96	25	99
3.	Projec tor	13	280	3640	3.64	1	3.64	25	91
4.	Speak ers	21	10	210	0.21	1	0.21	25	5.25
5.	Fan	110	60	6600	6.6	4	26.4	20	528
6.	Comp uter	26	250	6500	6.5	4	26	20	\$20 V
7.	Printer s	05	60	300	0.3	1	0.3	20	6 Harrio
8.	Photos tat Machi ne	02	650	1300	1.3	2	2.6	20	52
9.	A/C	09	7000	63000	63	1	63	25	1575
10.	Refrige rator	03	150	450	0.45	24	10.8	30	324

A campaign was organized by the Eco club of the college on the use of EV.

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 Two solar panels with the capacity of generating 60Wp of electricity have been installed in the campus which is expected to reduce the electricity consumption from the commercial connections. (KPTCL)





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Waste Management

Waste management is important for an ecofriendly campus. In college different types of wastes are generated, its collection and management are very challenging. The following data provide the details of the waste generated and the disposal method adopted by the college.

Total Classrooms	14
Canteen	1
Office	1
Auditorium	1
Library	1

- The students are insisted to take back the food waste as per the environmental strategy of the college.
- The canteen waste is being regularly collected by the Mangalore City Corporation
- Efforts are being made to create awareness among the students regarding waste conversion into energy through a compost unit.

Different types of waste generated in the college and their disposal.

Types of Waste	Particulars	Disposal Method
E-waste	Computers, electrical and electronic parts	Direct selling
Plastic waste	Pen, refill, plastic water bottles and other plastic containers, wrappers etc.	Direct selling
Sanitary	Napkins	Incinerator
Solid wastes	Damaged furniture	Resue after maintenance
Waste water	Washing, urinals, bathrooms	Soak pits
Organic waste	All kind of biodegradable waste	Decomposing unit

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Water Management

Sl.No.	Practice	Status
01	Wise use of water	Exist
02	Water Leakage repair	Exist
03	Use of Water Purifier	Exist
04	Use of Water Cooler	Exist
05	Water Storage	Exist
06	Water tank cleaning	Exist
07	Underground recharge of water	Exist

Rainwater harvesting facility has been created in the campus as per the specification of the environmental experts.





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Other Practices

SI.No.	Practice	Status	
01	E-Communication of all information's	Exist	
02	Paperless Office	Exist	
03	Eco-friendliness	Exist	
04	Serenity of classrooms	Exist	
05	Ladies rest room	Exist	_
06	Toilets for men, women & differently abled	Exist	The same of the sa
07	Carbon free campus	Partially Exist	S)
08	Plastic free campus	Exist Exist	

Green Landscaping

SI.No.	Practice	Status
01	Overall Green Cover	Partial

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6. Suggestions and Recommendations

- ➤ Green Campus: In order to increase the carbon credit and greenery of the campus, it is recommended to plant more indigenous and evergreen/ fruit trees inside the campus.
- ➤ Energy Management: The energy audit recommends avoiding the use of more energy consuming electrical appliances and to replace with more environment friendly and energy efficient appliances (for example five star rated air conditioner) in the college. The potential of renewable energy sources must be explored. As the college has a very large roof area for installing solar panels, it can be effectively used for generating power.
- Water Management: The water sources are safe in terms of contamination. The students are taking back the food waste as per the zero-waste management strategy of the college. It helped in reducing the consumption of water for washing.

> Waste Management

- Try to avoid the use of plastics in the campus, and to encourage the use of biodegradable materials as alternatives. Try to achieve the goal of plastic free campus.
- 2. The canteen waste can also be subjected to aerobic composting by setting-up of few composting yards in the campus. This will provide a chance for the students to learn by seeing and operating such compost yards by themselves. Also, a good practice of managing their own waste (from lunch box) instead of carrying them back home, they can be trained in operating the compost yard, by using their lunch time waste to produce good organic manure.

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Declaration

It is hereby declared that the above information's are correct and are practiced in the college.

Dr. Tharanath
PRINCIPAL
Shri Dhar Brianala Ghailmaneshwara
Law Gellageir Connuittee

Dr. Ravindra K. Rajput Member- IQAC Coordinator Dr. Chandrashekar K. R

Member/ Green Auditor

Mrs. Sharika Rai Member- Coordinator

