SRI RAMAKRISHNA DENTAL COLLEGE AND HOSPITAL

Coimbatore

GREEN AUDIT

REPORT

APRIL 2021

GREEN AUDIT REPORT

THIS IS TO CERTIFY THAT A GREEN AND ENVIRONMENTAL AUDIT HAS BEEN CARRIED OUT IN THE FOLLOWING UTILITY AS PER THE GUIDELINES IN THE MONTH OF APRIL 2021

NAME OF THE ORGANISATION	SRI RAMAKRISHNA DENTAL COLLEGE AND HOSPITAL, COIMBATORE
PERIOD OF AUDIT	APRIL 2021
NAME OF THE CERTIFIED AUDITOR	Dr.S.HEMA, M.E., Ph.D.,(Envi.Engg.,) EMS ISO 14001:2015 LEAD AUDITOR & IGBC ACCREDITED PROFESSIONAL

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GREEN AUDIT

1. INTRODUCTION

Green audit is the tool of management system used methodologically for protection and conservation of the environment. It is also used for the sustenance of the environment. The audit suggests different standard parameters, methods and projects for environmental protection. It can be adopted by any industry, organization, institute and even small residences. The green audit is useful to detect and monitor sources of 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 even the management of disasters.

2. ENVIRONMENTAL AUDIT IN ACADEMIC INSTITUTES

In 2006, Government of India has declared the National Environment Policy 2006 and made green audit mandatory to each industry. According to the policy, it is a response to India's national commitment to a clean environment, mandated in the Constitution in Articles 48 A and 51 A, and strengthened by judicial interpretation of Article 21 (National Environmental Policy, 2006). It is recognized that the maintenance of the healthy environment is not the responsibility of the state alone. It is the responsibility of every citizen and thus a spirit of partnership is to be realized through the environment management of the country. The process of environmental audit was formalized by Supreme Audit Institution (SAI) according to the guidelines given in Manual of Standard Orders (MSO) issued by Authority of the Controller and Auditor General of India 2002. By realizing the need of responsibility towards environment, NAAC, an autonomous body under UGC has added the concept of environmental audit in accreditation methodologies of universities and colleges.

2.1. Aims and objectives of Environmental Audit in Academic Institutes

To nurture environmentally friendly management in academic institutions some of the prominent objectives are:

- To recognize the initiatives taken by organization towards environment
- To secure the environment and cut down the threats posed to human health.
- To recognize, diagnose and resolve the environmental problems.

- To assess environmental performance and the effectiveness of the measures to achieve the defined objectives and targets.

Keeping the importance of environmental management, a detail environmental audit was carried out at Sri Ramakrishna Dental College and Hospital, Coimbatore, covering the major areas of water management, energy conservation, solid waste management and green campus.

3. ABOUT THE INSTITUTION

Sri Ramakrishna Dental College and Hospital (SRDCH), Coimbatore, established in the year 2011 by SNR Sons Charitable Trust is one of the 17 institutions managed by the trust. Sri Ramakrishna Dental College and Hospital has a quality policy and it implements quality systems to become a world class institution. The annual intake of students in the institution was initially 60 for UG course and since 2011 it's increased to 100 students for UG course. By 2009 the college was affiliated to have intake of MDS students in 5 clinical specialties. Sri Ramakrishna dental college and hospital is spread over 5.09 acres of land with easy access to both girls and boys' hostel within the main campus limit. It is a home for approximately 539 students. There are lot of facilities to supplement classroom teaching, library and labs. There are also small department level libraries within the institution which encourages and aids students in innovative thinking and to have better hand in clinical practice.

4. OBJECTIVE OF AUDIT

The aim of the environmental audit is to safe guard the environment and to conserve resources for sustainable development. The environmental audit was undertaken to show the areas of strengths and weaknesses, the extent of management practices available related to the environment, sustainable approaches to environmental problems in the campus and its environs, disposal of waste techniques, potential environmental management constraints and the focus of the future audits.

5. WATER AUDIT

A water audit is an on-site survey and assessment of water-using hardware, fixtures, equipment, landscaping, and management practices to determine the efficiency of water use and to develop recommendations for improving water-use efficiency. In simple words, a water audit is a systematic review of a site that identifies the quantities and characteristics of all the water uses. The site may vary from a public water utility, facility (institutional or commercial properties like malls, office, schools etc.) or a household. The overall objective of conducting a water audit is to identify opportunities to make system or building water use more efficient. Since water uses vary greatly from one type of business or institution to another and from site to site, therefore water audit is crucial to determine quantity, nature and quality of water consumption. Water audit for a water utility refers to tracking, assessing and validating all components of flow from the site of withdrawal or treatment through the water distribution system and into the consumer's properties.

The audit exercise provides decision making tools to the concerned people in the utility, institutions or households by identifying inefficient uses, problem areas wherein water conservation and remedial measures can be undertaken. Water auditing is an ongoing process and rarely stays consistent in a site or system over time. Therefore, in order to gauge progress from adopted water conservation and cutbacks, water audit should be performed on a regular basis. In addition, it provides convincing overview of the water use trends, effectiveness of conservation measures and potential cost and water savings. A detailed water audit was carried out in Sri Ramakrishna Dental College and Hospital, Coimbatore to measure and access the water usage, water losses in the system in order to find ways to optimize the use of the scarce resource for better water management.

5.1 METHODOLOGY

The key components in the water audit methodology undertaken in the institution included:

i. Pre-Audit Information

- Walk through the College premises to understand the nature of water uses and the systems installed in the campus.
- Discussion with the administrative officers and housekeeping employees on the various water uses during the day and the sources of water.
- Regular discussions with the administrative department were conducted throughout the exercise on current situation and the past trends in water

consumption, current sources, supply amount, source metering, distribution, storage, wastewater generation etc.

ii. Conducting a water audit

• Flow rate calculation from the taps and count of all water using fixtures/ equipment was undertaken.

• Collating records of water pumped to the overhead tanks, average borewell withdrawals, water bills etc. to estimate actual supply.

• The data collection and processing for personal water use including drinking, flushing and face/ handwashing, and other uses etc. was done on the basis of actual consumption.

• One litre bottle and 10 litres bucket method were used to estimate the flow rate from various taps used for a variety of purposes.

5.2 WATER SUPPLY

The primary source of water for the Campus is the municipal supplies, supplemented by the groundwater for drinking and sanitation purposes. The main source of potable/drinking water is the Siruvani water which is supplied by the Coimbatore Corporation. The potable water is stored in two underground sumps of capacity (31.5 KLD & 35.5 KLD) which is located near the main building. The underground water is sourced from one borewell located near Boy's hostel inside the campus. Groundwater is utilised for all the toilets and sanitation purposes. The depth of the bore well is 720 feet and is used for supplying water to all the toilets and for sanitation purpose in the campus. The average yield of the main borewell is about 4235 litres per hour, which was recorded using the 10 litres bucket test. The potable water supply details are recorded from the annual water consumption bills and the annual yield of the non-potable water is recorded from the pump usage data. A Reverse Osmosis Plant is also functional and is used to treat the hard water from the borewell and is then supplied for domestic usage. The RO unit is also being serviced and maintained at regular periods. The water consumption details are presented in Table 1.

Fig.1. Flow rate calculation by bucket method

Table 1. Overhead Reservoirs in the Campus

S.No	Location	Potable Water		Ground Water	
		Quantity	Capacity (KLD)	Quantity	Capacity (KLD)
1.	Hostel	1	1	1	28.6
2.	Kitchen	1	2		
Average Water Supply (KLD)			**1.8** KLD	**7.3** KLD	

Fig.2. Reverse Osmosis Unit

5.2.1 Calculation of water consumption pattern

The water consumption data was arrived from the actual survey and the results obtained from questionnaire survey regarding the frequency of water usage in toilets. The Permanent population (faculty, students, staff and visitors) count is considered for the study. In addition to these, the frequency, duration, flow rate of the plumbing fixtures was used to

measure the actual water consumption. The water consumption data is presented in the table below.

Table 2. Annual average water consumption in the Campus

WATER CONSUMPTION	QUANTITY (Litres/day)
POTABLE WATER	
Drinking water usage	550
Water usage in canteen	230
Hostels	330
TOTAL	1660
NON-POTABLE WATER	
Toilets/Bath	4800
Urinals	560
Handwashing/Sinks	340
Cleaning/Mobbing	350
Washing and Cleaning in Canteen	210
Gardening	210
TOTAL	6470

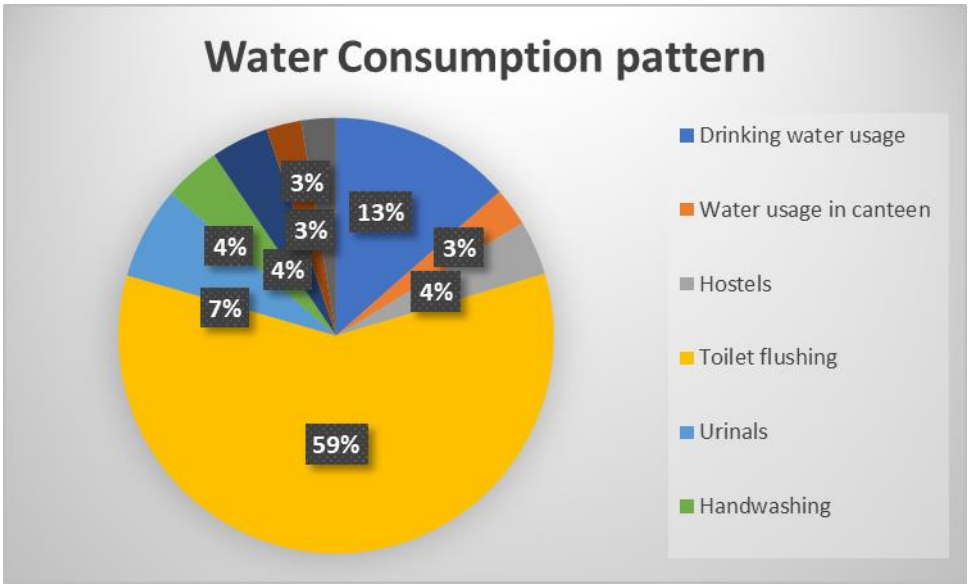


Fig.3. Water consumption pattern in the College

Table 3. Total Water Supply and Usage in the Campus

Item	Water use (in litres)	REMARKS
Average daily water supply, to the overhead tanks from the underground tank	7300	• Seasonal changes in frequency and usage • Rounding off errors and holidays count • Mixed use during current Covid situation.
Total calculated water consumption from the water audit	6470	
Difference between water consumption from overhead tanks and actual water use for various purposes	830	
Average daily water (Potable)supply	1800	-
Total calculated water consumption	1660	
Difference between water consumption and actual water use	140	

Table 4. Water quality Analysis

S.No	Parameters (mg/L)	Domestic Water	Raw water (Bore well)	Treated water (Borewell)	WHO International standard
1.	pH*	7.2	7.8	7.2	9.2
2.	TDS	216	3675	426	1500
3.	Total Alkalinity	135	590	275	500
4.	Total Hardness	135	720	285	500
5.	Na^+	135	1116	242	200
6.	K^+	35	38	16	200
7.	Ca^{2+}	3	88	46	200
8.	Mg^{2+}	26	123	41	150
9.	Cl^-	19	1560	337	600
10.	HCO_3^-	28	647	336	-
11.	CO_3^{2-}	165	54	12	-
12.	SO_4^{2-}	19.0	379	77	400
13.	F^-	0.4	1.2	0.6	1.5

*no units

5.3 PLUMBING FIXTURES

An exhaustive survey of the plumbing fixtures was carried out in the Campus and the complete data is presented in the Table (4) below. It should be noted that during the water audit conducted, minor leakages were identified in the taps and few fixtures were not in proper condition. After the preliminary audit, steps were taken to completely adopt water efficient fixtures inside the campus.

Table 5. Plumbing fixtures available in the Campus

USE AREA	LOCATION	TYPE OF FIXTURE	NO. OF UNITS	AVERAGE FLOW RATE (LPF)	MAX. FLOW RATE UPCV(LPF)
Dental Block Ground floor	Oral medicine	Sink Tap	3	3.6	6
	Oral Radiology	Sink Tap	2	4.8	6
	Clinical Lab	WB Tap	2	3.4	6
		Sink Tap	2	3	6
	Surgery PG	Sink Tap	3	5.3	6
	Surgery UG	Sink Tap	3	3.3	6
	Staff Clinic	Sink Tap	6	5.5	6
	Periodontics UG	Sink Tap	6	5.2	6
	Periodontics PG	Sink Tap	1	5.6	6
		WB Tap	10	4.5	6
	Pedodontrics	Sink Tap	4	5.2	6
		WB Tap	1	4.2	6
	Canteen	Sink Tap	4	4	6
	Drinking water	Tap	4	4	6
	Cabins	Sink Tap	1	4.8	6
		WB Tap	4	4.5	6
	Feeding room	Tap	1	5.2	6
	Ladies toilet	IWC	6	5.5	6
		EWC	1	3.4	6
		Tap	13	4.5	6
	Gents Toilet	IWC	3	8	6
		EWC	4	5.4	6
		Tap	29	5.6	6
		Urinals	9	5	4
Campus Outside area		Tap	11	5.6	6
Dental Block First floor	Pre-clinical lab	WB Tap	1	5	6
	Comprehensive clinic	Sink Tap	3	5	6
	IQAC Cell	WB Tap	1	5.5	6
	General Surgery	Sink Tap	24	6	6
	Surgery PG	WB Tap	4	4.5	6
	CSSD	Sink Tap	1	4.6	6
		WB Tap	1	4.4	6
	Seminar -Surgery	WB Tap	1	5	6
	Anatomy	Sink Tap	1	4.5	6
		Tap	2	4	6
	Bio-chemistry	Sink Tap	32	5.2	6
	CD Pre-clinical lab	Sink Tap	1	5.6	6
	Service Dept	WB Tap	1	5.5	6
	Oral P microbiology	Sink Tap	4	4.5	6

		Sink Tap	26	5.6	6
	Anatomy	Sink Tap	32	5.2	6
	Physiology	Sink Tap	6	5.2	6
	Ladies toilet	IWC	7	4.5	6
		EWC	1	4.4	6
		Tap	15	5.5	6
	Gents Toilet	IWC	2	4.5	6
		EWC	4	4	6
		Tap	21	5.2	6
		Urinals	9	3.6	4
	Drinking water	Tap	2	5.5	6
Dental Block Second floor	Ortho PG	WB Tap	16	4.5	6
	Ortho UG	Sink Tap	8	5.6	6
	Conservative UG	Sink Tap	5	5.2	6
	Conservative PG	Sink Tap	10	5.2	6
	Prostho Ceramic Lab	Tap	4	4.5	6
	Prostho Implant Clinic	Tap	13	4	6
	Seminar Hall	Tap	9	4.8	6
	Drinking water	Tap	4	4.5	6
	Prothodontrics M Lab	Tap	5	6.4	6
		Geyser	1	3.5	
	Prostho UG	Tap	4	4.5	6
		Geyser	1	4	
	Prostho PG	Tap	3	5.2	6
	Prostho Dental Lab	Tap	3	5.6	6
	Library	Tap	1	5.5	6
	Common room	Tap	2	4.5	6
	Public health Dentistry	Tap	3	4	6
	Ladies toilet	EWC	8	4.8	6
		Tap	22	4.5	6
	Gents Toilet	EWC	4	6.4	6
		Tap	23	4.5	6
		Urinal	9	4	4
Ladies Hostel	Office Toilet	EWC	2	5.2	6
		IWC	10	5.6	6
		Tap	18	5.5	6
		WB Tap	2	4.5	6
		Sink Tap	3	4	6
	First floor	IWC	12	4.8	6
		Tap	24	4.5	6
		Hotwater tap	1	4	6
		Sink Tap	4	5.2	6
	Second floor	IWC	12	5.6	6
		Tap	24	5.5	6

		Sink Tap	3	4.5	6
		Drinking tap	1	3.6	6
		Hotwater tap	1	3.5	6
	Third floor	EWC	29	4	6
		Hotwater tap	29	4.5	6
		Tap	58	4.4	6
		WB Tap	29	5.5	6
	Handwash	Drinking tap	1	3.5	6
	Kitchen & Outer	Drinking tap	7	3.4	6
		Drinking tap	5	3.4	6
Dental Block Third floor	Ladies' toilet	EWC	8	4.5	6
		Tap	22	5.2	6
	Gents Toilet	EWC	4	5.5	6
		Tap	22	3.4	6
		Urinal	8	3.5	4
Boys Hostel	Ground Floor	EWC	1	8	6
		IWC	0	5.4	6
		Tap	7	5.6	6
		WB Tap	2	5	6
		Hot water tap	1	3.6	6
		Drinking tap	1	3.4	6
	First floor	IWC	4	5	6
		EWC	5	5.5	6
		Tap	24	6	6
		Hot water tap	6	3.5	6
		Sink Tap	9	4.6	6
	Second floor	IWC	5	4.4	6
		Tap	10	5	6
		Sink Tap	4	4.5	6
		Hot water tap	1	4	6
	Third floor	IWC	5	5.2	6
		Hot water tap	1	3.6	6
		Tap	10	5.5	6
		WB Tap	5	4.5	6
	Headroom	Tap	1	5.6	6
Quarters		EWC	24	5.2	6
		Hot water tap	24	3.4	6
		Tap	72	5.5	6
		WB Tap	24	4.5	6
		Sink Tap	12	5.6	6
		Geyser	12	3.6	

Table 6. Water efficient Fixtures available in the Campus

S.No	Fixture Type	Total quantity available	Average Flow rate/ consumption
1.	Water closets (IWC)	54	4.5 LPF
2.	Water closets (EWC)	107	4 LPF
3.	Urinals	35	3.5 LPF
4.	Taps (Wash basins) & Sinks	635	4.3 LPF

Note: The capacity of the cisterns in the toilet was ascertained by the make of the cisterns. For the cisterns whose details are unknown, an exercise of measuring the drop in the water level after a single flush was carried out and flow rate is arrived at. To arrive at total water use from the taps, flow rate was computed using the one litre bottle test by recording the time taken to fill the bottle, which was then used to compute flow at litres per minute.

Fig.4. Water efficient fixtures

5.4 RAINWATER HARVESTING & WASTEWATER RECYCLING SYSTEM

The Institution has a well-designed system for treating the wastewater generated in the campus. The STP is available SNR Ground area adjacent to the campus area. The wastewater recycling system has been designed to treat 1.5 million litres per day of wastewater from all the toilets and wash areas inside the campus. The components involved in treatment are: a settler, a baffled reactor, aeration tank and a polishing pond. The treated wastewater is stored in the polishing pond and in an underground sump. This water is reused for irrigation and recharge purposes. Rainwater harvesting system has been proposed to be commissioned immediately inside the campus. Moreover, major areas within the campus are left unpaved to enable groundwater recharge through infiltration.

Fig. 5. Sewage Treatment Plant in the Campus

Fig. 6. Treated water reused for gardening

5.5 **RECOMMENDATIONS:**

- Flow measurement devices may be installed and maintained at all strategic points so that water losses from various components such as raw water source, conveyance system from raw water source to treatment plant, from treatment plant to treated water storage system, treated water storage system to distribution networks, individual users, etc. could be assessed at regular intervals.
- Rainwater harvesting system in existing establishment should be strengthened.
- High priority areas of water conservation have high scope for water conservation by using smart water meters to control overflow and leakages etc.,

6. WASTE AUDIT

A comprehensive waste audit was conducted in Sri Ramakrishna Dental College and Hospital, Coimbatore to identify, quantify and analyze the composition of the waste stream to ensure ways to improve sustainable practices.

The main objectives of the waste audit are:

- To identify the amount, nature and composition of the waste generated in designated functional areas of the campus.
- To understand the process of waste management and the extent of recycling.
- To suggest opportunities for reuse and recycle as well as to enhance and strengthen the existing recycling initiatives currently in place.

6.1. WASTE AUDIT METHODOLOGY

Dental college and Hospitals generate a number of biomedical wastes, including the materials such as scrap amalgam, photochemical waste (developer and fixer), lead foil from traditional X-ray packets, blood-soaked materials, human tissue, and disinfectants, which are challenging to the environment, apart from the general solid wastes. Wise handling and disposing them is critical. Sound management of biomedical waste is thus a crucial component of environmental health protection. The purpose of this audit is to find the types of biomedical waste produced in the campus, evaluate the waste management practices and to create awareness among the dental profession, regarding minimizing the production of biomedical waste and to encourage the best management practices, while disposing hazardous wastes.

General Waste

The institution follows the 3R's Reduce, Reuse and Recycle for the management of waste within the campus. The institution aims to extract the maximum practical benefits from waste products and to generate comparatively a minimal amount of waste. Waste management includes storage, collection, transport, handling, recycling, disposal and monitoring of waste management. Studies were carried to assess the composition of the waste generated in the Campus. The campus follows a good solid waste collection strategy, wherein the decomposable wastes are sorted out separately from the source of generation itself. The garbage generated in the campus is collected by the Waste management division of

Coimbatore City Corporation. The wet waste from the canteen and the hostel region is collected by a private waste handling operator ND Logistics Private Ltd, Coimbatore on a daily basis. Electrical incinerators are also available in the ladies' hostel for the safe disposal of the sanitary pad in a hygienic manner.

Bio-medical waste

The management has signed an agreement with M/s. Tecknotherm Industries, which is a common bio-waste treatment facility, functioning at Coimbatore. The biomedical waste generated during the diagnosis, treatment, immunization, and laboratory procedures are segregated and collected in appropriate Colour coded containers.

Segregation

The "key for waste management" is waste segregation. Only a segregation system can ensure that the waste will be treated according to the hazards of the waste and that the correct disposal routes are taken, and the correct transportation equipment will be used. Recycling can be only carried out if recyclable materials are separated from the hazardous waste. Contaminated materials are excluded from any recycling activity, and they must be treated as mixed hazardous waste. Without effective segregation system, a complete waste stream must be considered as hazardous. Segregated waste should not be mixed during transport and storage. If hazardous and non-hazardous wastes are mixed, the entire mixture must be considered and treated as hazardous waste. Only a segregation system can ensure that the waste will be treated according to the hazards of the waste and that the disposal routes are taken. The different categories of wastes generated from various places inside the campus is properly segregated at the source of generation.

Colour coding

Colour coding means to combine different waste groups with "similar hazards in one main group" in a fast and easy way by a fixed colour. The different waste groups have different colours for the containers/bags for the identification according to the hazards and applied throughout the complete disposal chain, that is, segregation, collection, storage, transport, and disposal. All the bio-medical wastes are segregated into four categories as shown (Fig.7) in various designated places inside the campus (Fig.8) and finally collected by the agency on a regular basis.

Oral Surgery-UG

Oral Surgery-PG

Oral Medicine

Pedodontics

Periododontics

Orthodontics

Prosthodontics Conservative Endodonctics

Fig.7. Waste Segregation in various departments

Bio-degradable Bio-waste

Non Bio-degradable

Fig.8. Waste disposal Area

Other Hazardous wastes

Lead-containing Wastes inside X-ray packets and lead aprons contain leachable toxin is properly collected and sent as scrap to a private agency on a regular basis.

6.2 Recommendations

Departments can purchase alternatives to common plastic products, such as biodegradable cups, biodegradable toothbrushes, microbead-free toothpaste, washable cloth patient bibs, washable cloth headrest covers, and sterilizable metal suction tips. To reduce lead and silver waste, offices should consider digital imaging, as digital images have been found equal in quality to x-ray films. The usage of Paper, cardboard, aluminum, plastics, etc., should be minimized. The need of the day is to sensitize the dentists and students to the various types of waste, their generation, segregation, collection, transportation, and final disposal, for improved waste management practices. Though separate bins were available for bio-medical waste, all the students should be aware of the types of wastes produced from all other departments and their appropriate segregation according to the Bio-medical waste handling rules. Information and awareness should be created by displaying posters on the information Board in every building and frequently updated to encourage and engage employee and student participation.

Fig.9. Sanitary incinerators in Ladies toilets

7. AIR QUALITY AND NOISE AUDIT

The campus is located in Coimbatore District in Tamilnadu, at 405 m above sea level and located at 11.00° N 76.95° E. The climate is Tropical in nature and temperature varies from 18.8º C in January and highest 35º C in April. This indicates that, the coldest month during winter is December and hottest month during summer is April. The quality of air inside the campus is satisfactory.

Table 7. Air Quality Data in the Campus

S.No	Parameters	Value/Concentration
1.	Temperature	33.4^{o}
2.	Humidity	50.6 %
3.	Precipitation	3.6 %
4.	Windspeed	3 km/hr
5.	CO2	215 ppm
6.	PM 10	43 micro gm/m^3
7.	PM 2.5	12 micro gm/m^3

The campus site is bounded to the North and East by residential, commercial properties, to the South by Nava India Road, to the West by the SNR College road with various shops, restaurants, hawkers etc., The Campus has a huge gate and a high compound wall which acts as a barricade to mitigate ‘noise’ inside the campus zone. Moreover, many numbers of tress are available in the boundary area which again controls the noise as well as acting as an oxygen park. During the study, the measurements of noise inside and outside College is well below the permissible limits. The indoors are properly ventilated and sufficient daylighting is available inside all the areas. Indoor plantation is also done which plays a major role in improving the air quality indoors.

Table 8. Noise Data in the Campus

S.No	Parameter	Value
1	Noise- Outdoor	55 dBA
2	Noise-Indoor	35 dBA

8. GREEN CAMPUS

Green plantation has been encouraged in the campus in order to reduce carbon foot print as well as GHG gases. The plants are selected to suit the soil and climatic conditions. Indigenous plants which help in building soil fertility and improve air quality are selected for the academic campus. Mostly native species are planted and are available in the campus. More than 30 varieties of trees and many species of garden plants are available which makes the campus pollution free and enhances the quality of air inside the premises. Measures for biodiversity conservation also highlighted and new trees are planted every year. This approves the efforts taken towards environment by the Institution.

Table 9. Species available inside the campus

Sl. No	Name of Trees/Plants	Count in numbers
	OUTER RING	
1.	Azadirachta indica	12
2.	Phyllanthus emblica	8
3.	Royatonea regia	4
4.	Canarium album	3
5.	Mutingia calabura	2
6.	Tecoma stans	4
7.	Careya arborea	1
8.	Cissampelos pareira	1
9.	Casuarina equisatifolia	1
10.	Madhuca longifolia	1
11.	Magnifera indica	2
12.	Melia azedarach	1
13.	Punica granatum	2
14.	Millettia pinnata	9
15.	Epigaea repens	5
16.	Thespesia populnea	1
17.	Psidium guajava	2
18.	Citrus limon	1
19.	Ficus carica	1
20.	Mesua ferrea	1
21.	Cassia fistula	1
22.	Cocos nucifera	2
23.	Catharanthus roseus	7
24.	Jasminum multiflorum	2
25.	Annona reticulata	1
26.	Mimusops elengi	1
27.	Bombax ceiba	1
28.	Petroselinum crispum	2
29.	Santalum album	1
30.	Pysana Nyal	4
	INNER RING	
1.	Pysana Nyal	49
	TOTAL	**133**

Fig. 8. Maintenance of Green Campus

Note of appreciation:

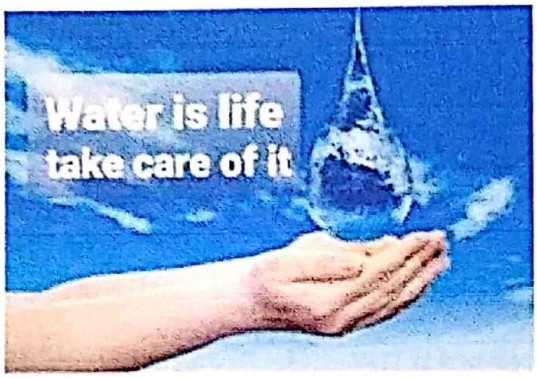
The public lights within the campus are run with solar panels to reduce carbon foot prints and Solar water heaters are adopted in all the hostels.

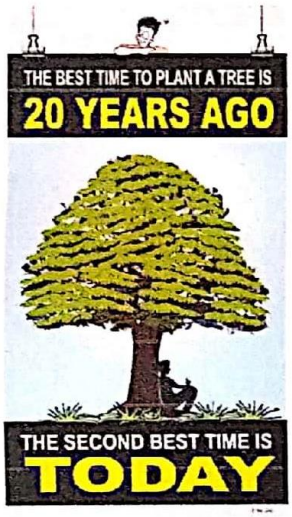
Fig.10. Solar Lamps inside the campus

9. FINAL RECOMMENDATIONS

- Green habitat concept should be adopted for all the building construction activities of the College in future, which may help a long way in reducing energy usage, increasing aesthetic appeal of the buildings and class rooms, besides reducing carbon foot print.
- Further, more green spaces should be established all around the campus around larger trees and shades for the benefit of the students.
- Vehicle pooling should be promoted among both students and faculty and use of bicycles can be promoted.
- Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Assign scientific names to the trees.
- Environmental auditing may be conducted once in every two years.
- Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service. Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
- Establish a Campus Environmental Committee that will hold responsibility for the enactment, enforcement, and review of the Environmental Policy. The Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy.
- 'No Smoking, No Tobacco' in campus area: The dental college campus is completely smoking and tobacco free and use of these are a punishable offence. The display boards and various eye-opening posters and wallpapers are recommended to be displayed at various places in the college.

- Various boards for the awareness on the environment control, noise control, conservation of energy, recycling of resources, tree plantation and environmental policy of college are recommended to be displayed for all the stakeholders.





Signature of Auditor

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