



GREEN, ENVIRONMENT AUDIT REPORT 2024-2025



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CHAPTER 1

INTRODUCTION

1.1 About Green Audit:

The ever increase in population as well as demand for higher economic growth has led to rapid urbanization along with increase in per capita fuel consumption. This has resulted in several environment and ecological concerns at local, regional, national and global level. In such conditions, adoption of Green Campus System and methodology for sustainable development has become more important than ever.

Briefly, Green Audit can be defined as systematic identification, recording, quantification, verification, analysis and reporting the components contributing to sustainable environment and development. Green Audit process can play an important role in promotion of environmental awareness and sensitization about resource use. It can create consciousness towards ecological values and ethics. Through green audit one can get direction about how to improve the condition of environment. Through this process the regular environmental activities are monitored within and outside of the concerned sites which have direct and indirect impact on surroundings.

Green audit is one of the initiative for such institutes to account their water management, waste management, energy management, green campus management, carbon footprint, sanitation methods. Such audit helps the campus to systematically introspect its strengths and weakness relevant to sustainable development, thereby enabling the campus to identify and implement the opportunities for improvement.

1.1.1 Objectives of Green Audit:

The overall objective of green auditing is to help safeguard the environment and minimize risks to human health. Following are the key objectives of an audit:

- To identify current green practices and various sustainability initiatives undertaken by RIT campus.
- To review and verify the physical existence as well as documentation relevant to green practices and various sustainability initiatives.
- To substantiate the compliance of green practices and various sustainability initiatives being followed at the RIT campus in accordance with guidelines of accreditation bodies, if any.
- To identify the scope for further improvement of green practices and various sustainability initiatives, both in qualitative and quantitative terms.

1.1.2 Goals of Green Audit:

Green Audit is conducted with specific goals as:

- Identification and documentation of green practices followed by RIT campus with its strengths and weakness.
- Conduct a survey to know the ground reality about green practices and analyse and suggest solution for problems identified from survey.
- Assess facility of different types of waste management.
- Increase environmental awareness throughout the RIT campus.
- Identify and assess environmental risk and motivates the staff for optimized sustainable use of available resources.
- The long term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

1.1.3 Benefits of Audit:

There are many advantages of environment audit to an Educational Institute:

- It would help to protect the environment in and around the campus.
- Recognize the cost saving methods through waste minimization and energy conservation. Empower the organization to frame a better environmental performance.
- It portrays good image of institution through its clean and green campus. Finally, it will help to built positive impression for through green initiatives the upcoming NAAC visit.
- To create a green campus.
- To enable waste management through reduction of waste generation.
- To create plastic-free campus and evolve health consciousness among the stakeholder.
- Recognize the cost-saving methods through waste minimizing and managing.
- Authenticate conformity with the implemented laws.
- Empower the organizations to frame a better environmental performance.
- Enhance the alertness for environmental guidelines and duties
- Impart environmental education through systematic environmental management approach and Improving environmental standards
- Benchmarking for environmental protection initiatives
- Financial savings through a reduction in resource use
- Development of ownership, personal and social responsibility for the RIT and its environment

- Environment auditing should become a valuable tool in the management and monitoring of environment and sustainable development programs of the RIT.

1.1.4 Stages of Audit:



1.1.5 Target areas of Green Auditing

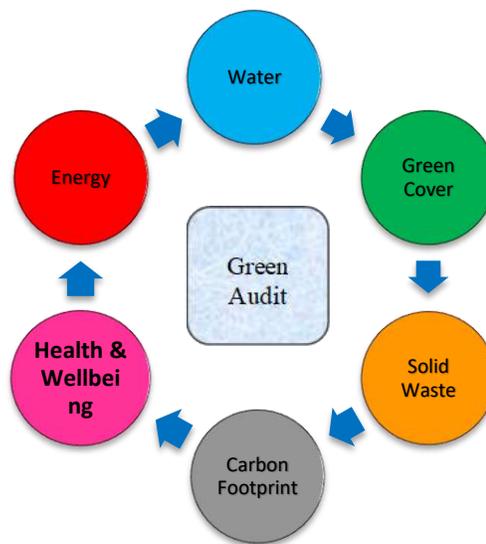


Fig 1: Target areas of Green Audit

- 1. Water and Wastewater Audit:** This indicator addresses water consumption, water sources, irrigation, storm water, appliances and fixtures.
- 2. Energy Consumption & Conservation:** This indicator addresses the amount of energy consumed by the campus. It examines the energy consumption patterns, identifies areas of high energy usage, and recommends strategies for energy efficiency and conservation.
- 3. Waste Management Audit:** This indicator addresses all types of waste from college campus and how effectively the college manages its waste, including measures taken to reduce, reuse, and recycle waste materials. It evaluates waste management processes, analyses the waste disposal methods, and suggests improvements to minimize environmental impact.
- 4. Biodiversity Conservation:** This indicator addresses the college's efforts in preserving and promoting biodiversity on its campus. It evaluates measures taken to protect local flora and fauna, enhance green spaces, and introduce native species. It also recommends initiatives to raise awareness about biodiversity conservation among students and staff.
- 5. Ambient Air quality and Noise Monitoring status:** It is the process of assessment of pollutants and noise level present in the atmosphere.
- 6. Carbon Footprint:** This performance indicator focuses on quantifying the college's greenhouse gas emissions. It measures the carbon footprint of the college, identifies sources of emissions, and suggests strategies to reduce emissions and combat climate change.
- 7. Health & Overall wellbeing Audit:** This Indicator addresses health & well-being facilities, so as to enhance physical, emotional and spiritual well-being of campus occupants.
- 8. Transportation Management:** This performance indicator examines the college's transportation practices and policies. It assesses the college's efforts to promote eco-friendly modes of transport, such as carpooling, public transportation, and cycling. It also evaluates the availability of parking spaces for electric vehicles and suggests measures to reduce reliance on fossil fuel-based transportation.

- 9. Education and Awareness:** This indicator evaluates the college's initiatives to educate and raise awareness about environmental issues among students, staff, and the wider community. It assesses the effectiveness of environmental education programs, awareness campaigns, and sustainability-focused events organized by the college.
- 10. Green Building Practices:** This performance indicator focuses on the college's infrastructure and building practices. It assesses whether the college follows green building principles, such as energy-efficient design, use of sustainable materials, and integration of renewable energy sources. It also suggests ways to improve the sustainability and environmental performance of existing buildings.
- 11. Stakeholder Engagement:** This indicator evaluates the college's engagement with various stakeholders, including students, faculty, staff, local community, and government agencies. It assesses the level of collaboration, consultation, and involvement of these stakeholders in the college's environmental initiatives. It also recommends ways to enhance stakeholder engagement and facilitate partnerships for sustainable development.
- 12. Green Campus Initiatives:** This indicator addresses various activities done by campus to maintain environmental sustainability.



1.2 College Profile:

Rajarambapu Institute of Technology (RIT) college is known as College of Engineering at Sakharale, established in the year **1983**. It is located near Islampur, 7 km away from Peth Naka off Pune - Bangalore highway. RIT has a green beautiful campus of **17.71** hectare and the total built up area (including under construction) is **54,859** Sqm. RIT is recognized by **A.I.C.T.E.** And is affiliated to **Shivaji University, Kolhapur**. All eligible UG & PG programs are **accredited/re-accredited by NBA**. RIT was a network institute, under the Union Government of India's prestigious **TEQIP-I&II** program and was supported by the World Bank during 2003-2009 and 2011-2017 respectively. NAAC ``A” Grade in 1st cycle from **2016-2021** and NAAC “A+”Grade in 2nd cycle from **2022-2027**. RIT has emerged as a leading technological Institute in Western Maharashtra through its dedicated and disciplined approach to provide quality technical education over a period more than thirty years.

Vision:

- To be globally recognized institute committed to excellence in academics, research, knowledge creation and delivery to develop socially responsible professionals.

Mission:

- To provide innovation and excellence in academic design, delivery and assessment to ensure holistic development of students for employability, entrepreneurship, and higher education.
- To design and keep the curricula updated, based on changing needs of industry and society worldwide, and to provide experiential learning through industry connect.
- To be at the forefront of emerging technological research, innovation and creation of intellectual property to attract talent.
- To retain talent by building relationships based on professionalism, mutual respect, accountability, engagement and integrity.
- To leverage alumni to inculcate leadership skills, social awareness and a passion for lifelong learning to make students socially-responsible global citizens.
- To build and maintain world-class infrastructure, and adopt modern automation technologies for the purpose of organizational efficiency.

- To identify alternate sources of revenue and augment inflows.

Rajarambapu Institute of Technology is an Autonomous institute **9** UG programs: Automobile Engineering, Civil Engineering, Computer Engineering, Computer Science and Information Technology, Computer Science and Engineering, Electrical Engineering, Electronics and Telecommunication Engineering, Mechanical Engineering and Mechatronics Engineering. **10** PG programs: Automotive Technology, Structural Engineering, Construction Management, Computer Science and Engineering, Power Systems and Power Electronics, Electronics Engineering Design Engineering, Mechanical Manufacturing Engineering, Thermal Engineering and MBA, **4** Ph. D. centres and **6** Diploma programs with a total of **4327** students in campus.

Table No.1: Total No. of teaching, non-teaching, others:

Sr. No.	Particular	Total No.
1.	Number of students in the College	5655
2.	Total Staff	550
Total		6505

Table No. 2: The College Build up area statement:

Sr. No	Name of Building	Area in Sq.m
1.	Main Building No. 1	9440
2.	Class Rooms Building	4500
3.	Workshop No. 1	1730
4.	Workshop No. 2	1730
5.	Smithy and Foundry	271.40
6.	Central Store	154
7.	Generator Room	49.40
8.	Vehicle Stand	878.75
9.	Canteen	208.53
10.	Guest House (Old)	348
11.	Mess No. 1 & 2	682.60
12.	Hostel No. 1 (Aryabhata)	1333
13.	Hostel No. 2 (Bhaskaracharya)	1411.70
14.	Hostel No. 3 (Chanakkya)	1804.70
15.	Hostel No. 4 (Dronacharya)	2200.50
16.	Staff Quarters	670.00
17.	Spark (Servicing Centre)	343
18.	Hydraulics Lab	654
19.	Boiler House	204.60

20.	Civil Store	22.60
21.	Welding Shop	270
22.	Ladies Hostel (Esha)	1482.40
23.	Main Building No. 2	7532
24.	Ladies Hostel (Fairy)	1500
25.	Recreation Hall	270.58
26.	Instruction Building	4700
27.	Structural Lab	640
28.	Continuous Education Center	1040
29.	Ladies Hostel (Haripriya)	2586
30.	Central Library	3000
31.	Staff Quarters 993/2	154
32.	Laundry Building	208
33.	Staff Quarters KNSQ	1300
34.	New Academic Building	6230
35.	Gymnasium Building	1690
36.	New Boys hostel	3000
37.	Industry Shed	186
Total Built-up Area		65092.76

Rajarambapu Institute of Technology, Urun Islampur is situated in Maharashtra at 17°03'48.47" N and 74°16'59.59" E, in the Sangli District.



Fig 1: Goggle Earth image of Campus

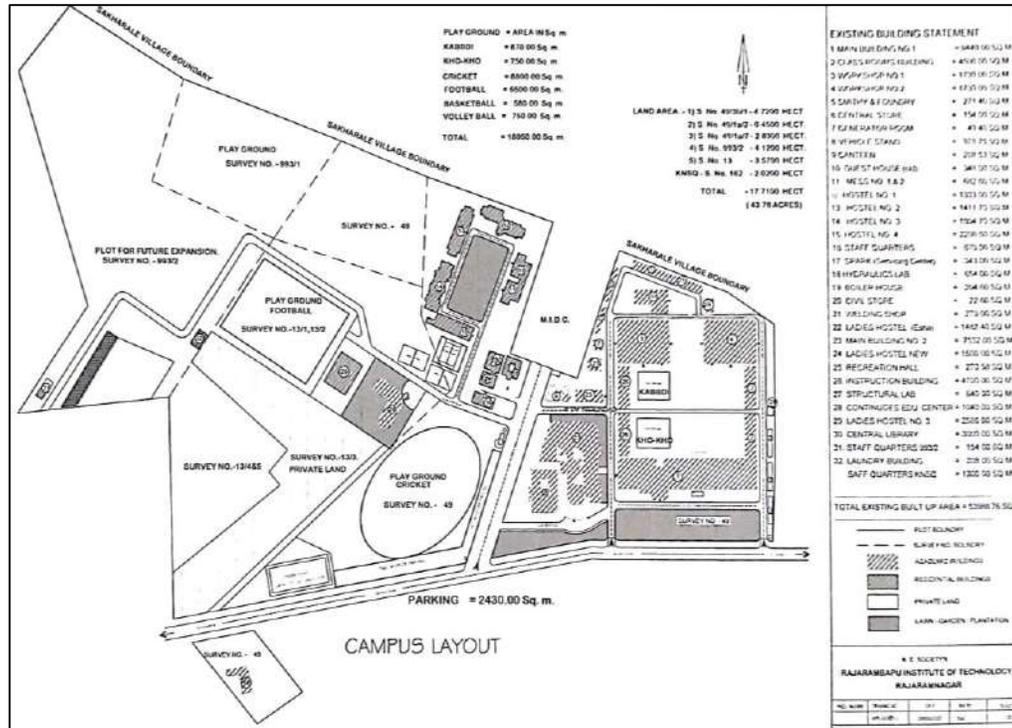


Fig 2: Campus Layout

Awards & Achievements:

- RIT campus recognized as **District Green Champion** for Sangli District for the academic year 2020-21.
- **Sustainable Institutions of India Green Rankings 2023** has certified RIT campus with “A” grade and **Gold Category**.
- **Best Paper Award** for the title “Improving Sustainability of Existing Building by considering IGBC Norms” in **International Conference on Environmental Sustainability 2023** organized by VJTI Mumbai.
- Under **Unnat Bharat Abhiyan** various projects related to Environment are completed which cost around 7 lakh.
- Institute have received funding of Rs. 53.6 Lakh sanctioned from Rajiv Gandhi Science and Technology Commission Mumbai for the project “**Biodegradable Plastic Packaging, Manufacturing**”.
- Institute have received funding of Rs. 2.5 lakh from Kirloskar Corrocoat Pvt. Ltd. for the project “**Solar Tank Coating Machine**”

CHAPTER 2

METHODOLOGY

The methodology adopted for this audit was a three step process comprising of:



The methodology adopted for this audit was a three step process comprising of:

1. Pre-Audit Phase:

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

2. Audit Phase:

- Understand the scope of audit
- Analyse the strengths and weaknesses of the internal controls
- Conduct the audit
- Evaluate the observations of audit program
- Prepare a report of the observations side by side

3. Post Audit Phase:

- Prepare a draft report of the data collected.
- Prepare a final report of the observations
- Distribute the final report to the management
- Prepare a recommendations to overcome the flaws of accordance with various audit and guidelines to implement it.

Green Audit was conducted systematically by using following procedure:

1. Site visit was arranged to whole RIT campus along with responsible staff.
2. Initial discussion is held with Dean of college, HOD of civil department and key staff members of the institute such as NAAC committee members who have been assigned the responsibility of sustainable practices implemented throughout the campus.
3. Further, it was discussed and decided to follow Guidelines of NAAC Criteria for assessment of green initiatives as well as IGBC guidelines for Green Campus.
4. Awareness session was arranged for the staff members of the institute about importance of Green Audit and its contribution in improving the overall environmental performance of the institute.
5. Physical checking of various green initiatives and facilities created through campus tour with NAAC Committee members undertaken was done.
6. Identification of the avenues for improvement in the existing green systems of the institute as well as continual improvement necessary for sustainable development of the institute was carried out.
7. Green audit team discussed the technical and economic feasibility of implementation of new systems with institute's staff members and management.
8. A draft report of all these findings and suggestions was prepared to identify any corrections/improvements.
9. The report was finalized after incorporating the suggestions by respective authorities and final report submitted to the institute.



CHAPTER 3

WATER AND WASTEWATER AUDIT

Water is one of the most critical aspect for life to exist and fresh water is a precious natural national resource. With continuous growth in population, per capita availability of utilizable water is going down, whereas the demand is ever increasing primarily due to life style changes and decreasing awareness on water management. It is clearly visible in the society that due to unsustainable use of water resources there is contamination and depletion of the natural water sources which is an alarming situation. Therefore, it becomes paramount to conserve protect and manage the water resources availability and usage so that it is sustainably used within the college campus.

Wastewater leads to the worst effect on human health. Microbes, toxins and water containing unnecessary amounts of salts give rise to many diseases. Around the globe, more than 80% of water borne diseases are due contaminated water. The waterborne diseases are infectious which spread primarily from polluted water. Hepatitis, cholera, dysentery and typhoid are the common waterborne diseases, which affect the majority of tropical area. Apart from diarrhea, and breathing problems, drinking polluted water causes skin diseases. If the polluted water gets stagnated, it becomes a breeding ground for mosquito and many other parasites which are very common in tropical areas. To protect human beings, plants and other life forms, it is necessary to find out the solution for waste water and collective efforts by individuals, society and government are required to achieve this aim.

Water and wastewater auditing is conducted to evaluate the quality, availability and usage of water the facilities available and methods adopted to revitalize and use it so that the resources are intact without leading to deterioration.

Water is required to the campus which includes college, hospital, hostel, staff quarters and canteen for various purposes like domestic use, cooling tower makeup, laboratory, green belt maintenance, washing and laundry.

3.1.1 Sources of water:

The water utilized in the campus is come from the following sources:

- 1. Islampur Municipal Council**
- 2. MIDC**
- 3. Irrigation Department**
- 4. Farm Pond**

3.1.2 Water Storage and Distribution:

The water from these sources is then stored in well, underground storage tank, elevated storage tanks located at various location in the campus. Form these storage the water is then distributed to various departments through pumping.

The water from MIDC is distributed to Hostels, Guest house and the water from the Municipal Corporation is distributed in academic campus area. The water from irrigation department is stored in a well and it is used for irrigation purpose.

3.1.3 Water Consumption in Campus:

Considering all sources of water, total water consumption is calculated as follows:

Table No 1: Water Consumption

Sr. No.	Sources	Water consumption in m ³ /day	Water consumption in m ³ /month
1.	MIDC	51.12	1533.6
2.	Irrigation Department	93.63	2808.9
3.	Islampur Municipal Council	4.51	135.3
4.	Rainwater Harvesting	2.63	78.9
5.	Grey Water Treatment Plant	1.96	58.8
6.	Laundry Waste Water Treatment Plant	2.71	81.3
Total		156.56	4696.8

So, **Total Water Consumption in per month = 156.56 m³/day**

Total Water Consumption in per month = 4696.8 m³/month

3.1.4 Current Practices for Water and Wastewater management:

1. Wastewater management in campus:

The total wastewater generated in campus is approximately 1,25,248 lit/day. The whole waste water from academic campus is collected and treated water is discharged to municipal drainage line at two different places. Waste water of south portion of residential area is collected at a point and then released to municipal drainage line and half side waste water is released to sugar factories agricultural land. All this water is flow through open drainage lines.

Grey water treatment plant is installed at Boys Hostel for treating wastewater from baths, sinks washing machine and other kitchen appliances. Plant capacity is 4500 lit/day. About

4500 lit water is treated in this treatment plant and remaining water goes to municipal drainage line. Treated water is further used for gardening purpose.



Fig 1: Grey water treatment plant at boys hostel

2. Farm Pond:

43.50 X 13.30 m and top size is 7.00 X 16.80 m while height 2.20 m. The farm pond has capacity of 1500 m³. When it fills to about 50% of capacity, it helps in recharging of ground water. The water from is used for gardening and flushing purpose.



Fig 2: Farm Pond

3. Rainwater Harvesting:

College having 4 Units of Rainwater harvesting system located in College Campus area and Boys Hostel Area. Details are given below:

Table No 1: Rainwater Harvesting Units

Sr. No	Location	Area of catchment in sq. m	Average Annual Rainfall in mm/year	Rainwater precipitation in catchment area lit/year	Purpose
1.	Hostel Building (Aaryabhata)	420	819	3,43,980	To recharge bore well and that water used for gardening purpose in hostel area.
2.	Hostel Building (Bhaskaracharya and Chanakya)	1030	819	8,43,570	To recharge bore well and that water used for Sagvan plantation at hostel area.
3.	Campus Area near Gate No.2	936	819	7,67,000	To recharge bore well and that water used for gardening purpose in campus area
4.	Campus Area near Mechanical Building	850	819	7,00,000	To store water in storage tank and that water used for flushing purpose in campus area,

- **Total Area available for Rainwater Collection: 3236 Sq. m.**
- **Total Water Available from Rainwater Harvesting: 26,54,550 lit/year**



Fig 3: Rainwater Harvesting Units at College Campus

4. Drip Irrigation System for Gardening: College has huge green campus area. Drip irrigation system have been installed at gardens which helps to save water and nutrients by allowing water to drip slowly to the roots of plants. The goal is to place water directly into the root zone and minimize evaporation to save water.



Fig 4: Drip Irrigation in Garden area

5. Laundry Waste Water Treatment Plant:

RIT have designed a treatment plant for laundry waste water, as in college daily approximately 4000 liters of water required for washing of cloths. From this process 3000 liters/day of waste laundry water is produced. The proposed treatment technology for sewage treatment consists of flocculation-using polymer along with membrane filtration system. In this first treatment process most of the impurities including heavy suspended particles, dirt, toxic dissolved impurities, toxic heavy metals etc. are efficiently removed in the form of sludge or flock. After primary process water sends to next treatment which is filtration. In this process, treated water

is sent to sand filter onto which all sludge is separated and clear water sent to next filtration process. After separation of sludge, it is then dried out and various nutrients like N, P, and K are mixed in the dried sludge. The final dried mixture of sludge then utilized as an agricultural fertilizers. In the final process, the clear water is passed through advanced filter so as to remove most of the dissolved impurities. At the final stage the treated water is deodorized and disinfected using well known agents. This treated water either released to farm or garden or it can be reused back for the laundry process.



Fig 5: Laundry Waste Water Treatment Plant

3.2 Recommendations:

- Institute should monitor the building wise consumption of water by **installing water flow meters** for respective buildings.
- Set up college's own **STP** in college and hostels
- Implement **leak detection audits regularly** and repair identified issues within a short timeframe
- Strengthening **awareness** on **water conservation** among student and teacher communities.
- . **Automization** of filling of water tank and its **monitoring** should be available in institute.
- Provide **Rain Water Harvesting system** to all **Girls hostel** and **new construction building**.
- Encourage **reuse systems** in laboratories or service areas where water can be partially treated and reused
- Perform water, energy and waste management **audits** frequently.
- The institute should promote use of **biodegradable detergents** and cleaning agents in college and hostel.
- **Save Water posters** to be affixed in the classrooms, hand washing areas.
- Expand awareness efforts: conduct **seminars, workshops, and water-conservation drives** targeting students, faculty, and staff.

CHAPTER 4

SOLID WASTE MANAGEMENT AUDIT

4.1 Solid Waste Audit of Campus:

The term solid waste management mainly refers to the complete process of collecting, treating and disposing of solid wastes. Solid waste can be divided into following categories: Municipal Solid waste, Hazardous waste and Biomedical waste. Municipal solid waste consist: Biodegradable wastes include food waste, canteen waste, wastes from toilets etc. Non-biodegradable wastes include what is usually thrown away in homes and schools such as plastic, tins and glass, bottles etc. and Construction and demolition waste. Hazardous wastes are toxic, extremely flammable, or explosive, and can be very harmful to humans, animals, and plants. Biomedical waste is generated during the diagnosis, treatment, or immunization of humans or animals, as well as during research, biological production, and testing.

Improper disposal of solid waste can create unsanitary conditions, and these conditions in turn can lead to pollution of the environment and to outbreaks of vector-borne disease. We collected the details of solid waste generation using questionnaires and observations and tabulated them below. We also diagnosed the prevailing waste disposal policies and suggested the best way to combat the problems in the recommendations.

4.1.1 Generation of Waste in Campus:

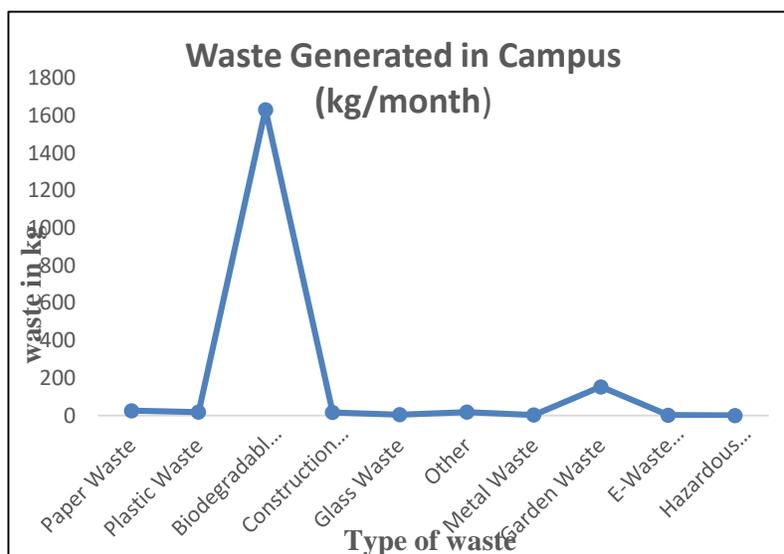
Table No 1: Generation of waste

Sr. No.	Type of solid waste generated	Source of Solid waste	Quantity (kg/day)	Quantity (kg/month)	Percentage (%)
1.	Paper Waste	Exam work, Lab work	0.86	25.8	1.38
2.	Plastic Waste	Plastic wrappers, old broken chairs, tables, plastic bottles.	0.63	18.9	1.01
3.	Biodegradable Waste	Hostel mess, Canteens, Cafeteria, Quarters, Gymkhana and Gardens	54.36	1630.8	86.96
4.	Construction Waste	Construction Work	0.56	16.8	0.90
5.	Glass Waste	Broken glassware,	0.16	4.8	0.26

		cups and glasses			
6.	Other	-	0.62	18.6	0.99
7.	Metal Waste	Construction work, scarp of benches, table, cupboard, cots.	0.11	3.3	0.18
8.	Garden Waste	Leaf litter, lawn clippings, garden cuttings, branches and leaves.	5.12	153.6	8.19
9.	E-Waste Waste	Computers, printer, laptops scanner, internet routers, Xerox machine, fused bulbs and tubes.	0.07	2.1	0.11
10.	Hazardous Waste	DG set, laboratory	0.02	0.6	0.03

So, Total Waste generated kg per day = **62.51 kg/day.**

Total Waste generated kg per month= **1875.3 kg/month.**



Graph No.1: Category wise Generation of Waste

4.1.2 Current Practices of Solid Waste Management:

Waste management reduces the effect of waste on the environment, health, etc. College has given yearly contract to '**Mauli Associates**' to maintain cleanliness and hygiene conditions at indoor and outdoor with **44 workers**. They are using various equipment's like **Scrubber dye**,

High Pressure Machine, Lawn Mover Machine, Grass Cutting Machine, STP Pump. Sweeping and Toilet Cleaning is done **2-3 times** in a day. **Two** different **bins** are provided for **dry** and **wet waste**. Waste from campus is collected into tractor and **disposed to landfill** within the campus.

The highest quantity of solid waste generated is **biodegradable waste** in which biodegradable kitchen waste from hostel mess is utilised for **biogas production**. **Garden waste** is utilised for **composting**. For **paper waste** institute follows **paperless policy**. **Hazardous waste** is handed over to the **vendor** for disposal process. **Construction Waste** from the construction of new building are used for **Landfilling** and **Levelling purpose** near Miyawaki.

For **E- Waste** special policy is made in college-if some parts of computers are in good condition, then these are used in assembling new computers. Such computers are given to school laboratories in nearby villages. The remaining damaged computers are given for e waste **recycling** to an authorised dealer, **‘Mahalaxmi E-Recyclers’**.



Fig 1: Collection of waste

1. Vermicomposting:

Vermicomposting is the process of composting using worms and is applied in waste management to produce high quality organic fertilizer. Garden waste is often mixed with other raw materials for vermicomposting. The college have 6 compost pit each of 2 m³ located near library, garden area in campus and near boys hostel. The leafy waste is collected from the campus and dumped here for composting process. Approximately 150 kg of compost is produced from each pit. Compost is used for gardening purpose and new plantation area in college campus.



Fig 2: Composting pit

2. Biogas Plant:

Due to construction activity at boys hostel the biogas plant is temporarily uninstalled. It will be started again after completion of construction.

3. Sanitary Napkin Incinerator:

Approximately **150 kg/month** sanitary waste produced from the Girls Hostel. Improper disposal of such waste can cause serious health effects. College has provided **5 no on incinerator** in girl's hostel. It disposes napkins in an environment friendly method by burning the pads and converting it into ash. Produced ash is non-toxic in nature which is used in garden area.



Fig 3: Sanitary Napkin Incinerator

4.2 Recommendations:

- A **biogas plant should be commissioned at the earliest** to process biodegradable waste generated from hostels, canteen, kitchens, and landscaping activities. The **capacity of the biogas system should be planned for future expansion**, allowing intake of additional green waste such as garden waste and nearby external organic waste where feasible.
- **Three-bin system** (Green – biodegradable, Blue – recyclable, Red/Black – reject waste) should be implemented across the entire campus including classrooms, hostels, laboratories, offices, and common areas.
- Color-coded bins with **clear signage and pictorial instructions** should be placed at strategic locations. Housekeeping staff, students, and vendors should be **trained periodically** on proper segregation practices. Waste segregation compliance should be **monitored daily**, and corrective measures taken for non-compliance.
- The institute should strictly **ban single-use plastics**, including carry bags, food packaging, disposable bottles, straws, cups, plates, containers, and cutlery. **Steel plates, glasses, and reusable cutlery** should be used in canteens, hostels, and during campus events. Use of **paper cups and plates should also be discouraged**, as they contribute to mixed waste and recycling challenges. Vendors operating within the campus should be **mandated to comply with plastic-free policies** through formal agreements.
- The campus should adopt a **Zero Waste Vision** focusing on waste prevention rather than disposal. A **Zero Waste Action Plan** should be developed with clear targets for waste reduction, reuse, recycling, and elimination. Procurement policies should prioritize **minimal packaging, reusable items, and bulk purchasing**. Events, seminars, and functions should be conducted as “**Zero Waste Events**” with reusable materials and no disposables.
- The institute should ensure **replacement of chemical-based and plastic products** with biodegradable alternatives for: Cleaning agents, Detergents, Sanitary products, Stationery and packaging materials. Only **eco-certified or environmentally friendly products** should be procured where feasible.
- All recyclable waste should be **cleaned, sorted, and stored separately** to maximize recycling value. Tie-ups should be established with **authorized recyclers or scrap dealers** for regular collection. Paper waste should be reduced through **digitization and double-sided printing policies**. PET bottles and metal cans should be collected through **designated collection cages or bins**.
- Regular **training programs and awareness campaigns** should be conducted for students, staff, and housekeeping personnel.

CHAPTER 5

ENERGY CONSUMPTION & CONSERVATION

An energy audit establishes the baseline for improvements in an organization's energy use. According to Energy Conservation Act, 2001, Energy Audit is the verification, monitoring, and analysis of the use of energy including submission of a technical report containing recommendations for improving energy efficiency with cost-benefit analysis and an action plan to reduce energy consumption.

The primary objective of Energy Audit is to determine ways to reduce energy consumption per unit of product output or to lower operating costs. In the specific case of an educational institution is to determine ways and means to move the institution towards net zero energy consumption while ensuring that the stakeholders have necessary awareness and appreciation for the energy management process.

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliances, and vehicles. Energy sources utilized by all the departments and services of college include electricity, liquid petroleum and LPG. Data for electricity consumption of the college for various departments was collected and is listed below.

5.1 Electricity Consumption

5.1.1 Electrical Equipment in the campus:

Details of various connected electrical equipment and electrical load present in Office, College Building, Hospital and Boys hostel and Girls hostel are considered.

1) Instructional Building- Class rooms- 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	108	4.32	4 hrs
LED Tube set	20	08	0.16	4 hrs
Electronic choke tube set	25	13	0.325	4 hrs
Ceiling fan	80	72	5.76	4 hrs
Computer set	300	09	2.7	4 hrs
Projector (Epson)	300	13	3.9	4 hrs
Water Cooler	700	02	1.4	4 hrs

Bathroom exhaust fan	12	02	0.024	4 hrs
Total			18.589	4 hrs

2) Department of Electrical Engineering – 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	82	3.28	4 hrs
LED Tube set	20	31	0.62	4 hrs
Electronic choke tube set	25	03	0.075	4 hrs
Ceiling fan	80	80	6.4	4 hrs
Computer set	300	73	21.9	4 hrs
Projector (Epson)	300	01	0.3	4 hrs
Water Cooler	700	03	2.1	4 hrs
Bathroom exhaust fan	12	03	0.036	4 hrs
Air conditioning system	1070	01	1.07	4 hrs
Total			35.781	4 hrs

3) Student Hostel: 30 Days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx x hrs.
Tube set (copper choke)	40	190	7.6	6 hrs
LED Tube set	20	475	9.5	6 hrs
Old Ceiling fan	110	40	4.4	6 hrs
C.G Ceiling fan	80	320	25.6	6 hrs
LED Lamp	14	100	1.4	6 hrs
LED Lamp	3	57	0.171	6 hrs
LED Street Light	60	79	4.74	11 hrs
LED Street Light	40	12	0.48	11 hrs
CFL Lamp	5	80	0.4	6 hrs
CFL Lamp	20	120	2.4	6 hrs
CFL Lamp	30	30	0.9	6 hrs
CFL Lamp	80	15	1.275	6 hrs
PL Tube	13	35	0.455	6 hrs
Geezer	3000	14	42	6 hrs
Solar geezer coil	3000	22	66	6 hrs

5 HP Motor pump set	3728.5	8	29.82	6 hrs
3 HP Motor pump set	2237.1	5	11.18	6 hrs
2 HP Motor pump set	1491.4	2	2.982	6 hrs
Projector (Epson)	300	01	0.3	4 hrs
Computer system	300	10	3	6 hrs
Printer inkjet	450	04	1.8	2 hrs
TV set	120	27	3.24	4 hrs
Water Cooler	700	20	14	6 hrs
Air conditioning system	1070	21	22.47	6 hrs
Induction cooker	3000	17	51	4 hrs
Fridge	130	6	0.78	6 hrs
Total			307.893	6 hrs

4) Administrative Office: 30 Days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	3	0.12	6 hrs
Electronics choke tube set	25	17	0.425	6 hrs
LED Panel GB Hall	20	20	0.4	6 hrs
LED Panel Director office	20	10	0.2	6 hrs
LED Panel KEs	15	04	0.06	6 hrs
LED tube set	20	29	0.580	6 hrs
LED bulb	15	15	0.225	6 hrs
LED bulb	7	6	0.042	6 hrs
LED bulb	9	29	0.261	6hrs
Ceiling Fan old	80	61	4.88	6 hrs
Computer system LCD	300	42	12.6	6 hrs
Printer HP	750	12	09	6 hrs
Xerox Machine	1600	03	03	6 hrs
AC	3250	11	35.75	6 hrs
Wall fan	60	5	0.3	6 hrs
Total			67.843	6 hrs

5) Civil Engineering Dept: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	05	0.2	4 hrs
LED Tube set	20	38	0.76	4 hrs
Electronic choke tube set	25	52	1.3	4 hrs
Ceiling fan CG	80	43	3.44	4 hrs
Ceiling fan old	110	03	0.33	4 hrs
Computer system LCD	300	61	18.3	4 hrs
Printer HP	750	05	3.75	4 hrs
Xerox Machine	1000	01	1.0	4 hrs
AC	3250	01	2.250	4 hrs
LCD projector	300	01	0.3	4 hrs
Total			31.905	4 hrs

6) Information Technology Dept: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	24	0.96	4 hrs
LED Tube set	20	32	0.64	4 hrs
Electronic choke tube set	25	52	1.3	4 hrs
LED bulb	15	125	1.875	4 hrs
LED bulb	14	24	0.336	4 hrs
Ceiling Fan CG	80	72	5.76	4 hrs
Ceiling Fan Old	110	01	0.11	4 hrs
Computer system LCD	300	197	59.1	4 hrs
Printer HP	750	07	5.25	4 hrs
AC	3250	11	35.75	4 hrs
LCD projector	300	04	1.2	4 hrs
Wall Fan	60	01	0.06	4 hrs
Table Fan	60	04	0.24	4 hrs
Total			112.21	4 hrs

7) Diploma office: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	10	0.40	4 hrs
LED Tube set	20	08	0.16	4 hrs
Electronic choke tube set	25	29	0.725	4 hrs
LED bulb	15	125	1.875	4 hrs
LED bulb	13	62	0.806	4 hrs
LED bulb	08	62	0.496	4 hrs
Ceiling Fan CG	80	44	3.52	4 hrs
Computer system LCD	300	61	18.3	4 hrs
Printer HP	750	04	3.0	4 hrs
Wall Fan	60	11	0.66	4 hrs
Table Fan	60	15	0.9	4 hrs
Total			30.84	4 hrs

8) Central Computer Centre: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	01	0.04	4 hrs
LED Tube set	20	25	0.5	4 hrs
Electronic choke tube set	25	29	0.725	4 hrs
LED bulb	18	62	1.116	4 hrs
Computer system LCD	300	118	35.4	4 hrs
Printer HP	750	02	1.5	4 hrs
AC	3250	11	35.75	4 hrs
LCD projector	300	02	0.6	4 hrs
Wall Fan	60	25	1.5	4 hrs
Table Fan	60	03	0.18	4 hrs
Total			77.311	4 hrs

9) Mechanical and Automobile Engg Dept: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	88	3.52	4 hrs
LED Tube set	20	25	0.5	4 hrs
Electronic choke tube set	25	25	0.625	4 hrs
Ceiling Fan CG	80	80	6.4	4 hrs
Computer system LCD	300	165	49.5	4 hrs
Printer HP	750	06	4.5	4 hrs
AC	3250	02	6.5	4 hrs
LCD projector	300	11	3.3	4 hrs
Exhaust Fan	60	02	0.12	4 hrs
Total			74.965	4 hrs

10) Computer science and Engg Dept: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	23	0.92	4 hrs
LED Tube set	20	55	1.1	4 hrs
Electronic choke tube set	25	36	1.1	4 hrs
Ceiling Fan CG	80	98	7.84	4 hrs
Ceiling Fan old	110	07	0.77	4 hrs
Computer system LCD	300	206	61.8	4 hrs
Printer HP	750	07	5.25	4 hrs
LCD projector	300	07	2.1	4 hrs
Exhaust Fan	60	05	0.3	4 hrs
TV	120	01	0.12	4 hrs
AC	3250	10	35.2	4 hrs
Total			113.63	4 hrs

11) Electronics and Telecommunication Engg Dept: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	75	3.0	4 hrs
LED Tube set	20	24	0.48	4 hrs
Electronic choke tube	25	38	0.95	4 hrs

set				
Ceiling Fan CG	80	110	8.8	4 hrs
Computer system LCD	300	104	31.2	4 hrs
Printer HP	750	07	5.25	4 hrs
LCD projector	300	12	3.6	4 hrs
AC	3250	01	3.25	4 hrs
Total			56.57	4 hrs

12) Rajarambapu Paramount Academic

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
LED Tube set	20	62	1.24	4 hrs
Ceiling Fan CG	80	34	3.72	4 hrs
Computer system LCD	300	02	0.6	4 hrs
Xerox	1600	01	1.6	4 hrs
Total			7.16	4 hrs

13) Management Department: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	24	0.96	4 hrs
LED Tube set	20	37	0.74	4 hrs
LED panel	15	40	0.6	4 hrs
Electronic choke tube set	25	75	1.875	4 hrs
Ceiling Fan CG	80	88	7.04	4 hrs
Computer system LCD	300	114	34.2	4 hrs
Printer HP	750	04	3.0	4 hrs
LCD projector	300	10	3.0	4 hrs
AC	3250	08	26	4 hrs
Total			77.415	4 hrs

14) Workshop No 2: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	60	45	2.70	4 hrs

LED Tube set	20	17	0.34	4 hrs
Electronic choke tube set	25	02	0.05	4 hrs
Ceiling Fan CG	80	16	1.28	4 hrs
Ceiling Fan old	110	01	0.11	4 hrs
Computer system LCD	300	48	14.4	4 hrs
Printer HP	750	03	2.25	4 hrs
LCD projector	300	01	0.3	4 hrs
Wall fan	60	06	0.36	4 hrs
Total			21.79	4 hrs

15) Workshop No 1: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	60	39	2.34	4 hrs
LED Tube set	20	14	0.28	4 hrs
Ceiling Fan CG	80	17	1.36	4 hrs
Computer system LCD	300	10	3.0	4 hrs
Printer HP	750	04	3.0	4 hrs
Industrial fan	1000	17	17	4 hrs
Industrial Lamp	250	14	3.5	4 hrs
AC	3250	01	3.250	4 hrs
Wall fan	60	04	0.24	4 hrs
Total			33.97	4 hrs

16) Civil Structure building: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	13	0.52	4 hrs
LED Tube set	20	01	0.02	4 hrs
Electronics choke tube set	25	17	0.425	4 hrs
Ceiling Fan CG	80	23	1.84	4 hrs
Computer system LCD	300	08	2.4	4 hrs
Printer HP	750	02	1.5	4 hrs
LCD projector	200	02	0.6	4 hrs
Industrial fan	1000	01	1.0	4 hrs
Total			8.305	4 hrs

17) Gymkhana: 30 days

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	09	0.36	4 hrs
LED Tube set	20	09	0.18	4 hrs
Electronics choke tube set	25	01	0.025	4 hrs
Ceiling Fan CG	80	02	0.16	4 hrs
Computer system LCD	300	02	0.6	4 hrs
Printer HP	750	01	0.75	4 hrs
Xerox	1600	01	1.6	4 hrs
Total			3.675	4 hrs

18) Canteen: 24 working days consumption

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	40	05	0.2	4 hrs
LED Tube set	20	04	0.1	4 hrs
Electronics choke tube set	25	05	0.125	4 hrs
Ceiling Fan CG	80	06	0.48	4 hrs
Fridge	2200	03	6.6	4 hrs
Total			7.505	4 hrs

19) Advanced Welding shop & fluid mechanics, sheet metal shop:

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
Tube set (copper choke)	60	65	3.9	4 hrs
Electronics choke tube set	25	35	0.875	4 hrs
Ceiling Fan CG	80	41	3.28	4 hrs
Computer system LCD	300	05	1.5	4 hrs
AC	3250	02	6.5	4 hrs
Exhaust fan	60	03	0.18	4 hrs
Industrial fan	1000	03	3.0	4 hrs
Total			19.235	4 hrs

20) New Library Building: 30 days

Particulars	Wattage (W)	Nos.	Load (KW)	Approx hrs.
LED Tube Set double side	56	101	5.656	8 hrs
LED Aslimline	45	57	2.565	8 hrs
LED Tubo	42	45	1.890	8 hrs
LED Round Down Light	17	621	10.557	8 hrs
LED Strip	14.5	13	0.1885	8 hrs
LED Batten Tube	28	57	1.596	8 hrs
LED Cob Down Light	9	62	0.558	8 hrs
LED Projector Light	17	24	0.408	8 hrs
LED Down Lighter	17	5	0.085	8 hrs
Sodium vapor Lamp	250	4	1.0	8 hrs
CFL Bulk head	9	17	0.153	8 hrs
LED Flood Light	50	4	0.2	8 hrs
LED Wall Light	13	21	0.273	8 hrs
Pendant Mounted Light	18X2	34	1.224	8 hrs
LED Round Lighting	22	32	0.704	8 hrs
Bollard Light	18	8	0.144	8 hrs
LED Wall Light	7	11	0.077	8 hrs
Total		1116	27.975	8 hrs

5.1.2 Annual Power Requirement:



Graph No.1: Unit generation in year 2024-25 (KVAH)

5.2 Energy Conservation:

5.2.1 Natural Light & Ventilation:

Natural light entering into the building is giving cool lighting effect without using the electricity, thereby helping to reduce carbon emission. This also reduces burden on artificial lighting to be used in the institute. Hence, use of as much as natural light as possible is always encouraged for educational institute.

Natural light and ventilation are provided in campus buildings. Architectural design is made in such way that utilization of natural light & ventilation is ensured. Following photos are captured to indicate the utilization of natural light in the building.

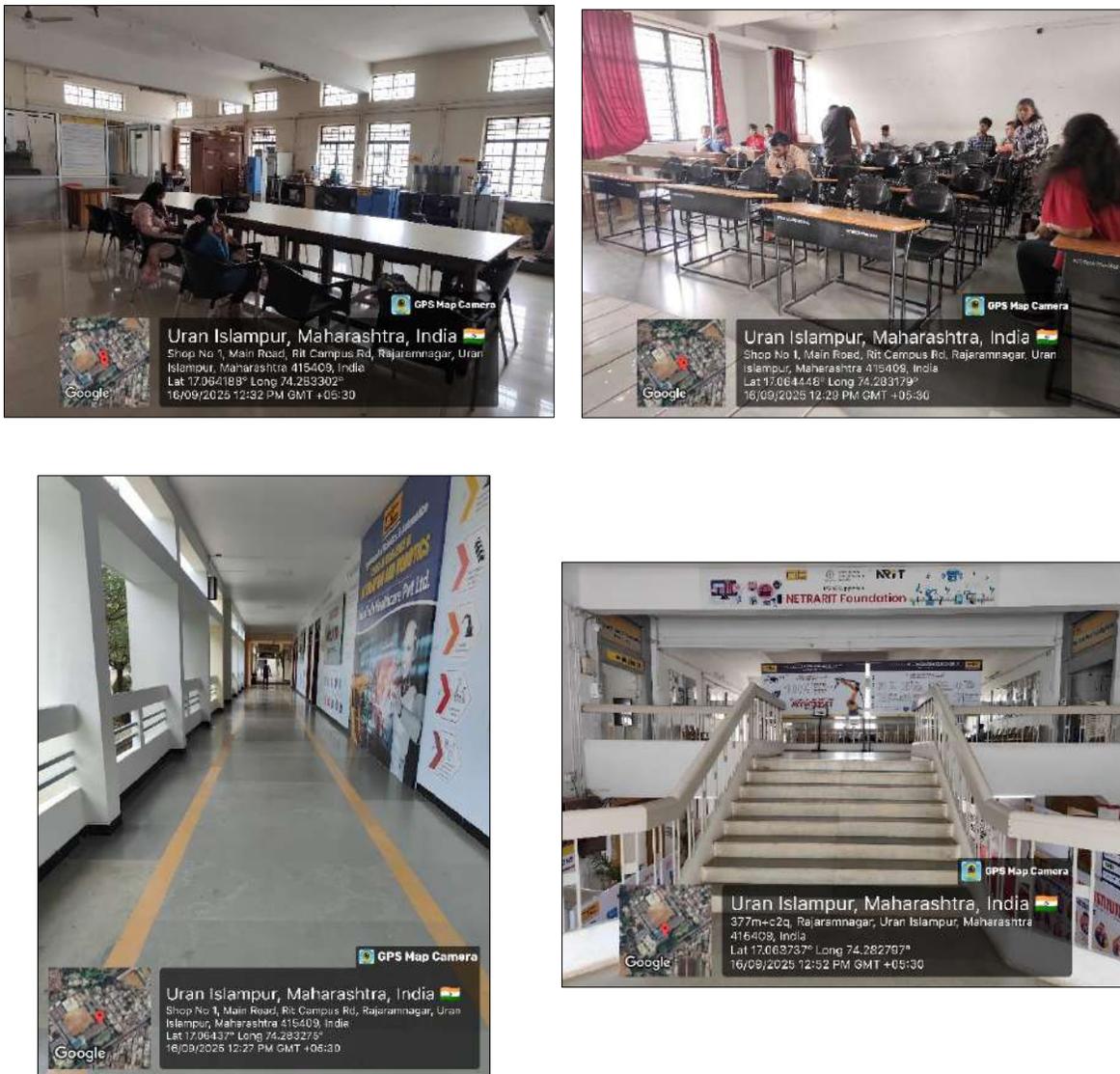


Fig 1: Natural Light & Ventilation at various locations

5.2.2 Renewable Energy Generation:

To promote green energy and energy conservation, the RIT, rajaramnagar, is all set to generate 300 kwp electricity by installing solar PV system on the roof of its RCC buildings. The institute has installed a 300 kwp rooftop plant connected to the power grid.



Fig 2: Solar PV system at rooftop of college building

5.2.3 Solar Water Heater system at Hostel:

Table No: Solar Water Heater at hostel

Sr. No.	Department	Student Capacity	Required heat water per person/liter	Total Require Water liter	Total available capacity of solar water heater in liter
1.	New Ladies Hostel	184	20	3680	4000
2.	A Hostel	150	20	3000	2000
3.	B Hostel	150	20	3000	2500
4.	C Hostel	150	20	3000	2000
5.	D Hostel	167	20	3340	2500
6.	E Hostel	135	20	2700	2000
7.	F Hostel	194	20	3880	2000
	Total	1130		22600	18000

Energy Saving and Economy Achievement Calculation

- No. of rooms available in hostel= 376 room
- Minimum single electrical geyser will be required for one room. Therefore, minimum 376 no. of geysers having 2 kW capacity will be required.
- Power being saved= 376 geysers x 2kW= 752 kW/day
- Energy being saved= 752kW x 1 hr= 752 units per day
- Annual energy Saving = 752x 300 = 2,25,600/- units
- Total amount of energy saved/day = 752 units x 15.74 Rs./unit = Rs. 11,836/- per day
- Total amount of energy saved/year (300days) = Rs. 11836 x 300 = Rs. 35,50,994/ year.

Outcome: The implementation of solar heater system has achieved annual energy saving of 2,25,600 units and amount Rs. 35,50,944

5.2.4 Environmental Consciousness and Sustainability

i) Percentage of lighting power requirements met through LED bulb= (Lighting power through LED bulb / Total lighting power requirement) X 100

$$= (59.9645 \text{ kWatt}/112.2885 \text{ kWatt}) \times 100$$

$$= 53.40 \%$$

Percentage of lighting power requirements met through LED bulb= 53.40% (in terms of wattage)

ii) Percentage of lighting power requirements met through LED bulb=

$$= (2842 \text{ Nos. } /4345 \text{ Nos.}) \times 100$$

$$= 65.69 \%$$

Percentage of lighting power requirements met through LED bulb= 65.69% (in terms of quantity)

5.2.5 Institute in process towards energy conservation:

- Step by step replacing the 40 Watt i.e. T12 Fluorescent Tube lights in the classrooms and laboratory and using 12W LED for same luminous flux.
- Replacing the 80W ceiling fan in class rooms and laboratories by energy efficient fans of 60w is much help to save the energy.
- Replacing old electrical control panel at workshop no. 1 & 2.

CHAPTER 6

BIODIVERSITY AUDIT

6.1 Biodiversity Audit in Campus

The objective of biodiversity audit is to assess the extent of activities undertaken and how well overall ecological environment is maintained. Biodiversity is all the different kinds of life form available in a given area—all the variety of animals, plants, fungi, microorganisms like bacteria and large flora & fauna that make up our natural world. Each of these species and organisms work together in ecosystems to maintain balance and support life. The census of Flora and Fauna is the major part of the Green Audit.

Presently, work done for campus is consist all flora, fauna, horticulture, landscaping and overall ecological environment. To maintain biodiversity special project “**Miyawaki Forest**” is done in campus area. At the outset it was observed that the college has involved its staff and students in several knowledge programs, sessions related to biodiversity from time to time, which is commendable. The **total green cover area** in RIT campus is about **10,800 Sq.m** and distributed among various parts of campus area and residential area.

The following flora species found in Campus area during the field assessment details of the species is given in the Table No.1

Table No 1: Flora Species (Campus Area)

Sr. No.	Common Name of plant	Botanical/ Scientific Name	Number	Height (approx. in feet)
1.	Coconut	Cocus Nucifera	32	20
2.	Almond	Prunus Dulcis	16	25-30
3.	Ashok	Saraca Asosa	33	35-40
4.	Palm	Borassus	33	20
5.	Gulmohor	Delonixregia Rafin	22	12-15
6.	Morpankhi	Thuja Occidentalis	73	3-5
7.	Silver Oak	Grevillea robusta	21	35-40
8.	Chandan	Santalum album	03	12-15
9.	Ficus	Ficus Carica	16	5-15
10.	Mango	Mangifera Indica	06	15-20
11.	Kaneri	Cascabelathevetia	15	14-15
12.	Banyan	Ficus benghalensis	03	35-40
13.	Tamarind	Tamarindus Indica	01	15-20

14.	Jambhal	Syzygium Cumini	01	20-25
15.	Limb	Azadaracta Indica	02	
16.	Bahava	Cassia Fistula Linn	09	35-40
17.	Christmas	Araucaniacolumnaris	08	25-30
18.	Ixora	Ixora Coccinea	24	5-6
19.	Phuljhade	Flowers	17	
Lawn Cover Area- 34611+17850=4873.79 Sq. m				
Total Trees=335				

The following flora species found in Residential area during the field assessment details of the species is given in the Table No. 2

Table No 2: Flora Species (Residential Area)

Sr. No.	Common Name of plant	Botanical/ Scientific Name	Number	Height (approx. in feet)
1.	Coconut	Cocus Nucifera	141	20
2.	Almond	Prunus Dulcis	21	25-30
3.	Ashok	Saraca Asosa	47	35-40
4.	Palm	Borassus	71	20
5.	Gulmohor	Delonixregia Rafin	04	12-15
6.	Morpankhi	Thuja Occidentalis	62	3-5
7.	Mango	Mangifera Indica	18	15-20
8.	Lemon	Citrus aurantium	02	5-6
9.	Chiku	Achras Sapota	07	10-12
10.	Tamarind	Tamarindus Indica	02	15-20
11.	Jambhal	Syzygium Cumini	01	20-25
12.	Christmas	Araucaniacolumnaris	02	25-30
13.	Humbar	-	03	12-13
14.	Parijatak	Nyctanthes arbor-tristis	02	12-14
15.	Jack Fruit	Atrocarpusintegra	01	15-18
16.	Peepal	FicusReligiosa Linn	02	25-30
17.	Teak	TectonaGrandis Linn	307	50-55
18.	Nilgiri	Eucalyptus globulus	13	30-35
19.	Indian Gooseberry	Emblicaofficianalis	01	12-15
20.	Ixora	Ixora Coccinea	02	5-6
Lawn Cover Area- 1800 Sq.m				
Total Trees= 709				

Table No 3: Flora Species (Football ground)

Sr.	Common Name	Botanical/ Scientific	Number
1.	Ashok	Saraca Asosa	08
2.	Palm	Borassus	25
3.	Mango	Mangifera Indica	06
4.	Kranaja	Pongamia pinnata	08
5.	Kanchan	Bauhinia variegata	09
6.	Gulbhendi	Thespesia populnea	10
7.	Gulmohar	Delonix regia	10
8.	Tamarind	Tamarindus indica	10
9.	Chenduphal	Parkia biglandulosa	05
10.	Jambhul	Syzygium Cumini	10
11.	Jangali Cherry	Prunus avium	08
12.	Tembhurni	Diospyros melanoxylon	10
13.	Almond	Prunus Dulcis	10
14.	Nana	Lagerstroemia	09
15.	Nilmohar	Jacaranda mimosifolia	10
16.	Peepal	Ficus Religiosa Linn	10
17.	Pivala chafa	Plumeria acutifolia	07
18.	Guava	Psidium Guajava	10
19.	Pandhari Savar		05
20.	Palas	Butea monspersma	10
21.	Payar		10
22.	Padal	Stereospermum colais	10
23.	Jack Fruit	Atrocarpus integra	07
24.	Almond	Prunus Dulcis	10
25.	Boganvel	Bougainvillea	10
26.	Bottle brush	Callistemon	04
27.	Bhokar	Cordia dichotoma	10
28.	Maharukh	Ailanthus excels	08
29.	Royal kashiya	Cassia fistula	10
30.	Long pepper	Piper longum	09
31.	Banyan	Ficus benghalensis	10
32.	Wawala	Holoptelea integrifolia	10
33.	Teak	Tectona Grandis Linn	08
34.	Sita Ashok	Saraca asoca	10
35.	Shisham	Dalbergia sissoo	10
36.	Spathodea	Spathodea campanulata	09
37.	Agnimanth	Clerodendrum Phlomidis	10
38.	Arjun	Terminalia arjuna	10

39.	Bidi leaf	Bauhinia racemosa	10
40.	Indian	Phyllanthus emblica	
41.	Adulsa	Justicia adhatoda	35
42.	Undal	Calophyllum inophyllum	10
43.	Curry tree	Murraya koenigii	09
44.	Wood apple	Limonia acidissima	06
45.	Kailaspati	Couroupita guianensis	10
46.	Cadamb	Neolamarckia Cadamba	10
47.	Lemon Grass	Cymbopogon citratus	32
48.	Gulvel	Tinospora cordifolia	
49.	Jaswand	Hibiscus rosasinensis	27
50.	Jarul	Lagerstroemia floribunda	10
51.	Bay leaf	Cinnamomum tamala	10
52.	Tulas	Ocimum tenuiflorum	09
53.	Bahava	Cassia Fistula Linn	10
54.	Bixa	Bixa orellana	07
55.	Bel	Aegle marmelos	10
56.	Bakul	Mimusops elengi	08
57.	Bibba	Semecarpus anacardium	10
58.	Behada	Terminalia bellirica	10
59.	Mahogany	Swietenia	07
60.	Parijatak	Nyctanthes arbor-tristis	10
61.	Ramphal	Annona reticulate	10
62.	Red Sandalwood	Pterocarpus santalinus	09
63.	Ratrani	Cestrum nocturnum	10
64.	Neem	Azadirachta indica	10
65.	Lemon	Citrus aurantium	10
66.	Shami	Prosopis cineraria	08
67.	Shikakai	Acacia concinna	09
68.	Custard Apple	Annona Squamosa	10
69.	Betel nut	Areca catechu	07
70.	Simarouba	Simarouba glauca	10
71.	Hadaga	Sesbania grandiflora	05
Total=713			



Fig 1: Flora in the Campus

The list of the birds seen in the campus is given in the following Table no

Table No 4: List of Birds

Sr. No.	of Bird	Scientific Name
1.	Crow	Corvusbrachyrhynchos
2.	Koel	Eudynamysscolopaceus
3.	Bulul	Pycnonotidae
4.	Hammingbird	Trochilide
5.	Common Woodshrike	Tephrodornispon dicerianus
6.	Eurasian Collared Dove	Streptopeliadecaocto
7.	Parava	-
8.	Sparrow	Passeridae
9.	Pigeons	Columbidae
10.	Red kite bird	Milvus
11.	EurasianSparrowhawk	Accipiter nisus
12.	Parrot	Psittaciformes
13.	Common hoopoe	Acridotherestrictis
14.	Wood pecker	Picidae
15.	Black headed ibis	Threskiornisme lanocephalus
16.	Cattle egret	Ardeidae
17.	Common Hoopoe	Upupaepops
18.	Green Bee eater	Meropsorientalis
19.	Common hawk-cuckoo	Hierococcyxvarius



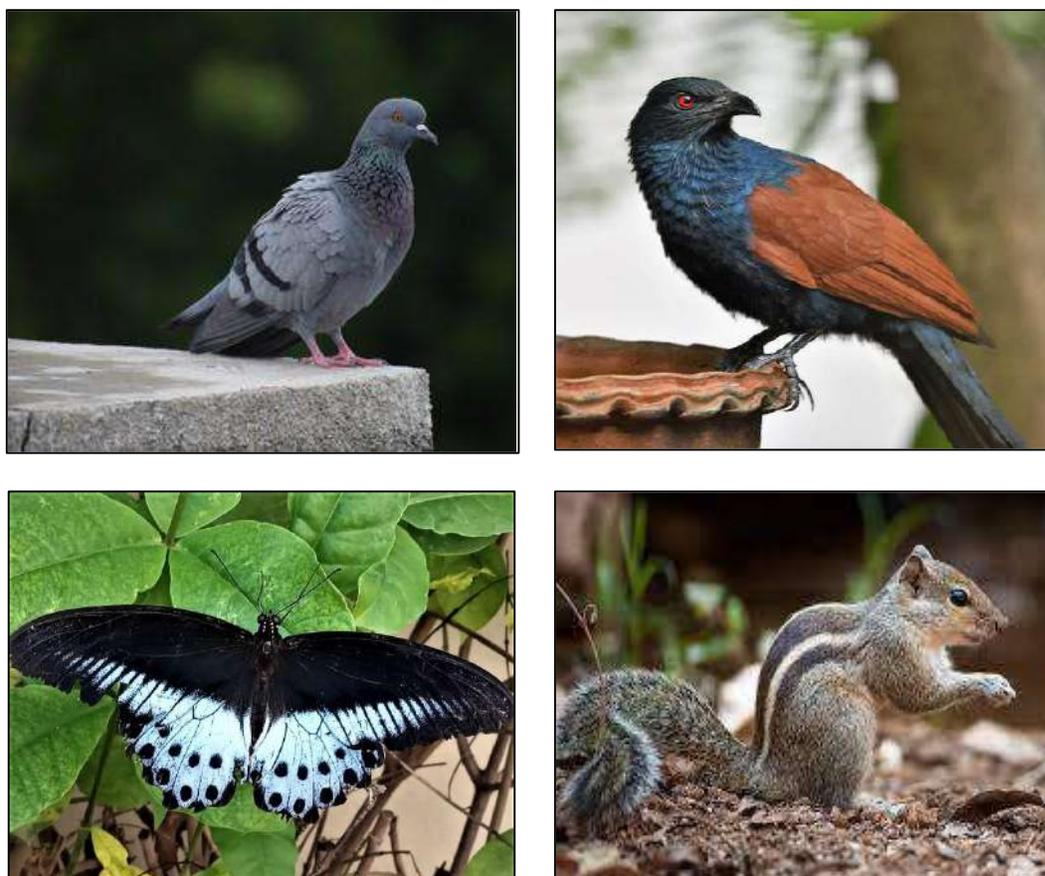


Fig 2: Fauna in the Campus

6.1.1 Miyawaki Forest in Campus:

An efficient technique for creating mini-forests quickly is Miyawaki Forest. It is based on the methods of a Japanese forester and botanist named Akira Miyawaki, an expert in studying natural forests and restoring their native vegetation. The goals of a Miyawaki technique include improving biodiversity, sequestering carbon, increasing green cover, lowering air pollution, and preserving the water table.

This Concept is followed by the College. Total area covered under this project is nearly **700 Sq.m.** The institute having farm pond for Miyawaki Forest. The various native species like *Mangifera Indica*, *Azadirachta indica*, *Ficus religiosa*, *Ficus Benghalensis*, *Polyalthia Longifolia* are planted on this site. **Total 1430 plants** are planted which consist **30 species of high rise plants, 30 species of medium rise plants** and 30 species of shrub are planted by the Institute in the Miyawaki forest. The forest shows good growth of plants. The planted tree shows 1 to 2 feet height in one year of their growth. The trees selected for the forest are native to the local area and having the great symbiosis with each other. It is assumed that a single tree supports oxygen demand of two people for their life. Thus, these 1430 trees will

support the oxygen amount required for 2860 people on and around the campus. The forest will have the good and fast carbon sequestration rate as the forest contains fast growing plants. As the campus possess Miyawaki forest with 1430 plants, these plant will store 31.17 tons of CO₂ approximately annually.

Benefits of Project:

- Maximum number of trees can be planted in less space.
- This project is given more importance to cultivate biodiversity.
- Students get information about all plants in minimum space.
- It creates a great habitat for birds and animals.
- Morning or early morning walk provides healthy oxygen and it helps to keep the human body healthy.
- Good food is available for animals and birds.
- Forestation rate is increases by using this technique so life of animals and birds will not be disturbed.
- Forestation rate is increased then the number of wild animals entering the human habitat will be reduced and human damage will be avoided.

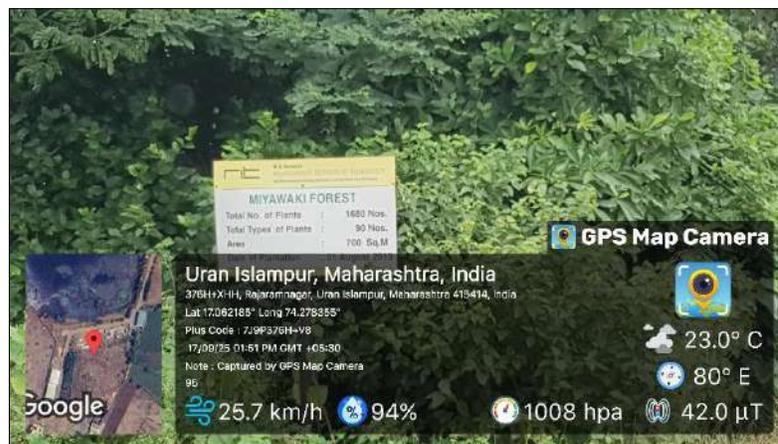


Fig 3: Miyawaki Forest

6.2 Recommendations:

- Expand documentation efforts beyond trees to include **shrubs, herbs, climbers, insects, birds, amphibians, and other fauna**, creating a complete campus biodiversity inventory.
Publish periodic **biodiversity lists and field guides** with scientific names, common names, conservation status, and ecological roles. Involve **botany/zoology experts or local biodiversity groups** for accurate species identification and validation.
- Conduct periodic **quantitative assessment of carbon sequestration and biomass** of campus vegetation. This helps quantify the ecosystem service provided by your green cover and aligns with ecological audit goals. Prepare an annual **carbon sequestration report** to track year-to-year changes in carbon store and inform campus sustainability planning.
- Involve **students, faculty, staff, and local community members** in biodiversity surveys, workshops, and citizen science activities to deepen ecological awareness. Organize **biodiversity clubs, field walks, and training sessions** on species identification, ecological monitoring, and conservation practices.
- Establish **vegetable and fruit gardens** to support a variety of fauna (birds, insects, small mammals) by providing food and habitat. Expand **butterfly gardens** with host and nectar plants to promote pollinator populations and enhance ecological diversity. Promote **vertical landscaping and green walls** on campus buildings to increase plant cover, which aids micro-habitat creation and improves thermal comfort.
- Conduct **annual plantation drives** focusing on native and ecologically valuable species to support local biodiversity and resilience. Install **artificial nesting boxes and habitats** (for birds, bats, insects) to encourage wildlife presence and reproduction. Prioritize planting **indigenous species** to maintain genetic and ecological integrity and avoid invasive plants.
- Create **biodiversity maps** to show spatial distribution of habitats (forested patches, gardens, lawns, wetlands) and ecological hotspots within campus boundaries. Use these maps to identify **priority areas for restoration, protection, or monitoring**.
- Partner with **local forest departments, botanical gardens, NGOs, or academic experts** for technical support in surveys, species identification, and conservation strategies.
- Include biodiversity goals in the institute's **environmental policy and sustainability framework**. Ensure biodiversity considerations are integrated into **landscaping, construction, maintenance, and waste management plans**.

CHAPTER 7

NOISE MONITORING

7.1 Ambient Noise Monitoring Status:

Noise or sound level monitoring or measurement is a process to measure the magnitude of noise in industries and residential area. Data collected from Noise level monitoring & testing helps us to understand trends and action can be taken to reduce noise pollution. Noise pollution is Low or High-frequency sound that can cause/harm the activity of human life. The sampling was carried out using **Digital Sound Level Meter (KM 929 MK1)** in Decibels (dB) in different areas of college campus during office hour. The details are given in the following Table 2:

Table 2: Ambient Noise Monitoring Status at different locations

Sr. No.	Locations	Readings Day Time Leq(A) dB	CPCB Day Time Standard
1	College Campus		50dB
i	Garden Area	62.23	
ii	Ground Area	47.72	
2	Main Building 1		
i	Entrance Hall	51.21	
ii	Administrative	46.56	
3	Main Building 2	52.12	
4	Electrical Building	46.19	
5	Mechanical	45.41	
6	Workshop	45.72	
7	Library		
i	Entrance	56.45	
ii	Reading room	51.17	
8	Gyamkhana	47.64	
9	Canteen	46.34	
10	PG Building	46.94	
11	Boys Hostel	46.45	
12	Girls Hostel	45.61	
13	Staff Quarters	46.21	
14	New Girls Hostel	45.29	
15	Guest House	47.41	
16	College Gate		
	Gate No 1	70.12	
	Gate No 2	68.98	

	Gate No 3	69.49	
17	Generator Off Condition	46.57	
18	Generator On-140KVA	72.69	
19	Generator On-160KVA	72.84	
20	Both Generator On Condition	74.73	



Fig 1: Noise Monitoring

7.2 Recommendations:

- Install **continuous noise monitoring stations or sound level meters** at key campus locations (entrances, near roads, academic buildings, hostels and silent zones) to regularly record ambient noise levels. This can help identify patterns and exceedances of standards. Consider **real-time monitoring with digital dashboards** for ongoing tracking and data recording. This data can be used to inform mitigation actions and reporting.
- Strictly enforce **silent zone rules** around academic areas, hostels, libraries, and health centers. Noise levels in these zones should comply with the permissible limits set by environmental authorities.
- Noise-producing operations (e.g., maintenance work, equipment testing, renovation or delivery activities) should be **scheduled during non-peak hours, holidays, or after office hours** to minimize disruption. Establish a **noise activity schedule calendar** and communicate it to all departments and contractors.
- Conduct **noise awareness campaigns** among students, staff, and visitors to emphasize the importance of minimizing loud activities (horn honking, loud music, public announcements). Disseminate information about **acceptable noise levels and health impacts** of noise pollution.

CHAPTER 8

CARBON FOOTPRINT

Carbon is an essential element for life on Earth. It is present in all living organisms as a key component of organic compounds. Carbon dioxide (CO₂), a compound of carbon and oxygen, plays a significant role in maintaining the Earth's temperature through the greenhouse effect. This effect helps the planet retain enough heat to support life. However, human activities such as burning fossil fuels, deforestation, and industrial processes have led to a significant increase in carbon dioxide concentrations in the atmosphere. The excess CO₂ traps more heat, leading to global warming and climate change. This alteration in the climate pattern has severe consequences, including rising sea levels, altered weather patterns, and the loss of biodiversity. Carbon compounds also play a crucial role in various environmental processes. For example, carbon is a fundamental component of organic matter in soil. It is vital for soil fertility, as it provides essential nutrients for plant growth and nourishes the microbial ecosystem. Additionally, carbon compounds are used in water treatment processes and as a basis for various industries, including plastics, textiles, and pharmaceuticals.

CARBON FOOTPRINT

Carbon footprints are a measure of the total greenhouse gas emissions produced by an individual, organization, or product. It serves as an indicator of the impact of human activities on climate change. The footprints primarily focus on carbon dioxide (CO₂) emissions, but also consider other greenhouse gases like methane and nitrous oxide. Carbon footprints measure the amount of greenhouse gas emissions, mainly carbon dioxide, released into the atmosphere as a result of human activities. These footprints are essential for understanding the impact of our actions on climate change. By calculating and analyzing carbon footprints, organizations and individuals can recognize the areas where they contribute to greenhouse gas emissions and take necessary steps to reduce them. It helps in raising awareness, creating benchmarks, implementing strategies, and promoting sustainable development.

The concept of carbon footprints has gained significant importance in recent years due to the growing concern about climate change. It helps individuals and organizations understand their contribution to greenhouse gas emissions and take necessary actions towards reducing them. By calculating carbon footprints, one can identify the major sources of emissions and implement strategies to mitigate their impact on the environment.

Efforts for Carbon Neutrality:

These days many colleges in India are increasingly recognizing the importance of reducing their carbon footprints and striving for carbon neutrality. With their potential to influence and

educate the younger generation, colleges can lead by example and inspire sustainable practices. Several initiatives are being undertaken by RIT to achieve carbon neutrality.

- One of the significant efforts is the installation of renewable energy systems. RIT is investing in solar panels to generate clean and sustainable electricity. By shifting to renewable energy sources, it strives to reduce its reliance on fossil fuels and lower its carbon emissions. This step not only contributes to carbon neutrality but also promotes a clean energy transition.
- Another approach adopted by the college is the implementation of energy-efficient technologies. By replacing traditional lighting systems with energy-saving LED lights, optimizing HVAC systems, and encouraging the use of energy-efficient appliances, colleges can significantly reduce their electricity consumption and, consequently, their carbon footprints.
- RIT also promotes sustainable transportation options. By encouraging students and staff to use public transportation, bicycles, or carpooling, it reduces the emissions associated with commuting. Implementation of electric vehicle charging stations on campus also encourages the use of eco-friendly vehicles.
- Furthermore, it raises awareness and conducts educational programs on climate change and sustainability. By organizing seminars, workshops, and campaigns, RIT educates its students and staff about the significance of carbon neutrality. Such initiatives help foster a culture of sustainability and motivate individuals to adopt environmentally friendly practices.

It also takes steps to reduce paper waste and promotes digitalization. By adopting online documentation and digital communication systems, RIT minimizes paper consumption and decreases its carbon footprint associated with deforestation and paper production. In conclusion, the college along with all its staff and students work hard and are sincere with their efforts towards achieving a state of sustainable carbon neutrality. By focusing on renewable energy, energy efficiency, sustainable transportation, and raising awareness it significantly reduces its carbon footprints. These efforts not only contribute to mitigating climate change but also inspire students and communities to adopt sustainable practices in their lives. Achieving carbon neutrality is a collective responsibility, and however small it may be, our college always tries to actively contribute towards this global movement.

Electricity Carbon Footprint:

Electricity generation is a significant contributor to carbon footprints. The college has taken notable steps to reduce its electricity carbon footprint. It has installed solar panels on rooftops to harness clean energy and reduce dependency on fossil fuel-based electricity. Additionally, energy audits have been conducted to identify areas of high energy usage and find energy

saving solutions. Efficient lighting systems and motion sensors have been installed to reduce unnecessary energy consumption. In the campus, electricity is used for various purposes like residential, office use, and laboratories. The total electricity used in the campus liberates mass kg of CO₂ per year. The laboratory equipment consumes the highest electricity which emits a large amount of carbon CO₂ per year. The solar panels are installed on the roof of various buildings produce electricity from solar panels which further saves ample mass of CO₂ per year.

Paper Footprint:

The paper footprint is another aspect that the college considers in its environmental audit. The usage of paper contributes to deforestation, which in turn contributes to increased carbon dioxide levels. To address this issue, the college has adopted measures such as promoting digital documentation, encouraging double-sided printing, and educating staff and students about the importance of reducing paper consumption. Additionally, recycling initiatives have been implemented to ensure that used paper is reused efficiently.

Carbon Sequestration:

Carbon sequestration can play a crucial role in further reducing our carbon footprint. Our college should explore opportunities to establish green areas and plant trees on the campus. Trees act as carbon sinks, absorbing carbon dioxide during photosynthesis and storing it in their biomass. Additionally, the college can explore partnerships with organizations involved in sustainable forestry and carbon offset programs to contribute to sequestration efforts. In summary, understanding carbon footprints helps in assessing the impact of our activities on climate change. Our rural College acknowledges the significance of reducing carbon footprints and has implemented various measures to achieve carbon neutrality. By addressing electricity consumption, paper usage, and promoting sustainable practices, we can continue to make significant progress towards mitigating climate change and creating a more sustainable future.

Conclusion:

Understanding and addressing carbon footprints are vital for our college's environmental audit. It allows us to assess our impact on climate change and take necessary measures to reduce emissions. By implementing sustainable practices and promoting renewable energy, our college is making significant efforts towards carbon neutrality. However, more can be done to further reduce our carbon footprint and mitigate climate change impacts.

Recommendations:

To improve our carbon footprint, the college should consider implementing the following recommendations:

- Strengthening renewable energy initiatives by investing in additional solar panels or exploring other alternative energy sources.
- Promoting bicycle usage on campus and encouraging carpooling among students and staff to reduce transportation-related emissions.
- Increasing awareness and education on climate change and carbon footprints among students and staff through workshops, seminars, and awareness campaigns.
- Implementing a comprehensive waste management system that includes proper disposal and recycling of waste materials.
- Collaborating with local communities and organizations to implement reforestation projects and carbon offsetting initiatives.

CHAPTER 9

INFRASTRUCTURE, SITE PLANNING & OUTDOOR ENVIRONMENT AUDIT

This sub-sector audit related to infrastructure particularly focused on reviewing the below activities or process of the institute:

1. Overall site planning and layout.
2. Infrastructure of the institute including building design, green buildings inside the campus, urban heat island effect etc.
3. Transport and mobility.

Following are the observations made under this audit:

1. The college campus has sufficient green area i.e. 10,800 sq.m which keeps campus area cool and college also have more focus on plantation this year college planted 820 new trees. This helps to reduce heat island effect.
2. The topography of the college is such that on the back side of the academic block the natural slope leads to, where the rainwater drainage rushes during high rainfall event.
3. Buildings and the campus is designed in such a way that it is quite airy during summers and has sufficient plants to keep the building cool naturally.
4. The internal campus mobility is pedestrian friendly and college even has e-bicycle facility.
5. Entry of vehicles within the campus is banned so noise and air quality is maintained.
6. All classrooms are having proper natural ventilation and day lightening.

Recommendations:

- Adopt green building rating system like **IGBC GRIHA OR LEED** which will further help in maintaining the campus for different environmental aspects.
- In College Development Committee (CDC) assign one **Environment Expert**.

CHAPTER 10

HEALTH AND WELLBEING AUDIT

According to WHO “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” The audit addresses health & well-being facilities, so as to enhance physical, emotional and spiritual well-being of campus occupants. Health and well-being is a critical component of any green or environment audit. Overall health and well beings of occupants is the most important aspect of Indian Green Building Congress - Campus rating system also. The following are the key observations are made under this audit:

1. College has been found to provide the right and best atmosphere for developing and sustaining an individual and community health and well-being in the best possible way.
2. The institute campus is complete friendly to differently abled and senior citizens.
3. All Basic Amenities are easily and conveniently available in college campus it consist- Guest House, Bank, ATM, Cafeteria, Hospital, Laundry Auditorium, Garden, Saloon, RO water purifier.
4. Health and Well-being facilities available in college are gymnasium, yoga, meditation, indoor games, outdoor games and playground. Additionally college provide, FM radio station, healthcare, and emergency and security facilities within the campus such as Ambulance, First aid, Clinic, Emergency alarm, Surveillance system.
5. As per the government norms Fire Safety System is installed in all the buildings of Academic campus.
6. College also work for other personal, inter-personal and community issues like mental health, anti-ragging, hygiene. Counselling cell is provided in the campus.
7. In the campus strict provision is made to ban Tobacco and Smoking. Banners are displayed in the campus to divert the younger generation away from such addictions.



Bank & ATM



Transport facility



Ground



Gym



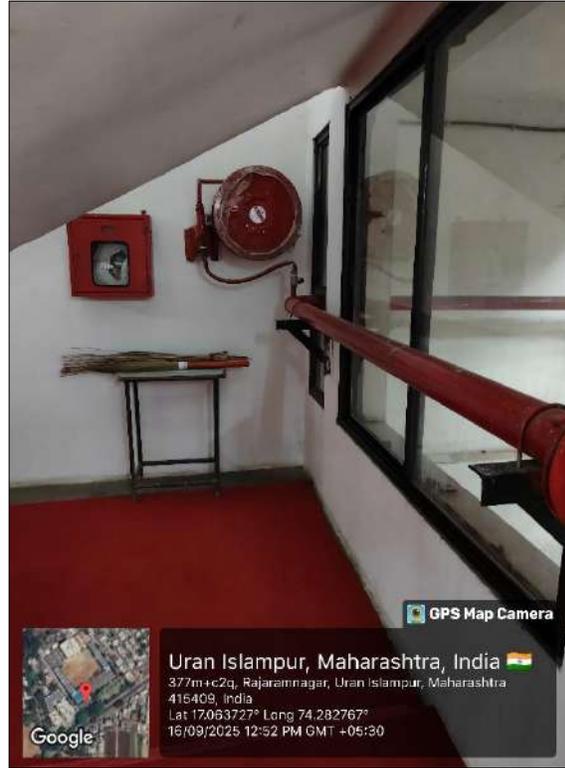
Canteen



Ambulance



RO water



Fire safety



Tobacco free campus



Antiragging

Recommendations:

Carry out specific survey on general health and wellbeing of the occupants of the campus to assess the gaps, and check the overall impact of all the programs, support group sessions, overall living and working environment on health and wellbeing of the staff and students.

CHAPTER 11

GREEN CAMPUS INITIATIVES

Due to minimum consideration for environment & sustainability, the world is facing problems of ozone depletion, climate change, water scarcity and sustainable resource management. College organises guest lectures on environmental conservation, biodiversity etc. every year.

College has demonstrated consistent commitment towards nature and environment for the last 18 years. Civil engineering department work for environmental sustainability under ‘**Unnat Bharat Abhiyan**’. College has ‘**Renewable Energy Club**’ and the ‘**RIT Nature Club**’ and ‘**Islampur Ploggers**’ which offers wide spectrum of environmental and nature activities and platforms to enhance awareness and exhibit the relationship with nature. The **National Service Scheme (NSS)** of the college undertakes projects for environment, rural development, education awareness, healthcare, etc. Various activities like cleanliness drive, tree-plantation, seminars and workshops are organised by Renewable Energy Club/ RIT Nature Club/ NSS increase the awareness and sensitivity among students and faculty.

1. Unnat Bharat Abhiyan (UBA)

Under UBA institute has adopted following villages for their development in collaboration with District Administration. Various projects related to Organic Farming, Water Management, Artisans, Industries and Livelihood, Basic Amenities and Sustainable Energy are successfully completed for the following villages: 1. Bavachi 2. Bhilawadi 3. Hazarwadi 4. Junekhed 5. Sawantpur.

2. RIT Renewable Energy Club for energy conservation:

In order to create awareness about new and renewable sources of energy among students, in January 2006. RIT has opened Renewable Energy Club under the guidelines provided by Ministry of Non-Conventional Energy Sources. The club has been registered at Maharashtra Energy Development Agency. Following activities are taken under this club:

- Every year this club organizes events like seminars, workshops, expert lectures, poster and essay competition, and field visits to renewable energy projects in the vicinity. Also the club is celebrating Rajiv Gandhi Akshay Urja Diwas on August 20th every year.
- The staff and the students are also given instructions about to save energy by switching off the fans, tubes, computers, etc. when not in use.
- The air conditioners are used only in essential conditions in the institution and laboratories.

- Solar energy panels are used for heating water for bathrooms in hostels. Solar street lights are installed in front of college main building.

3. RIT Nature Club:

With the objective to uphold interest about wildlife and the environment among students the club has been started in 2005. The club works toward creating awareness among students about scientific and economic values of nature. Students get opportunities to serve the objective of protection and conservation of natural environment through various activities of the club like tree plantation, celebrating non-vehicle day in the institute, trekking and PUC testing programs. The club is celebrating World Environment Day on 5th June every year.

4. Islampur Ploggers:

RIT NSS Vivek Vahini and DLA started one group named as Islampur ploggers. The purpose of this group is picking garbage and jogging. On every Sunday they collect garbage at one location and create awareness about it. Other groups from Islampur also participated in this activity.

5. Bicycle and E-Bicycle:

5-Bicycles and **5 E-Bicycles** are provided in the campus for internal transport. It is used in only campus and hostel premises.

6. Green Initiatives & Awareness Activities by RIT College:

Sr. No.	Date	Activity	Venue
1.	21/06/2024	Celebrated National Yoga Day by the students and faculties.	College Campus
2.	12/07/2024	Organized tree plantation drive with active participation of staff and students.	College Campus
3.	15/08/2024	Organized tree plantation drive with active participation of staff and students.	College Campus
4.	02/10/2024	Create awareness to use khadi products by arranging Khadi Stall with active participation of students, faculty.	College Campus



Fig 1: Celebration of National Yoga Day at College Campus



Fig 2: Tree Plantation Drive at campus



Fig 3: Tree Plantation Drive at campus



Fig 4: Create awareness to use Khadi products at RIT Campus

Recommendations:

- Institute awards to acknowledge the efforts of campus occupants, local communities, NGOs for implementing eco-friendly practices/ green initiatives.
- Constitute a formal committee/ forum with the involvement of campus occupants, local communities & NGOs, to identify and implement at least two eco-friendly practices/ green initiatives within and outside the campus. The eco-friendly practices/ green initiatives can include, but not limited to, clean & green campaigns on waste segregation & recycling, water conservation, energy conservation, use of public transportation/ bicycles/ carpooling, world green building week, earth hour.
- Under Environment Science course every year students should do one environment project for campus.
- Organize at least three outreach/educational programmes in a year with the involvement of campus occupants, local communities & NGOs, to increase public awareness on environment sustainability and green features of the campus. The outreach/ educational programmes can include, but not limited to, promotional materials (posters, brochures, etc.), information portals, and awareness programmes.
- Organize earn while learn eco-friendly programmes.
- Ensure participation of students and teachers in local environmental issues.
- Adopt an environment policy for the college.
- Conduct exhibitions for parents and public on environment and sustainable practices.

CHAPTER 12

CONCLUSION

- The Green, Environment Audit, and Energy consumption and conservation conducted at the college serves as a crucial assessment tool to evaluate the institution's current environmental practices and its overall sustainability performance. It has helped in identifying the strengths of existing green initiatives and energy-efficient practices while also pointing out the areas that require further attention and improvement.
- This audit clearly demonstrates that the college is committed to adopting environmentally responsible behaviour and has made noticeable progress over the years in integrating sustainability into its operations. From waste management and water conservation to green landscaping and awareness programs, the institution has taken several commendable steps toward reducing its ecological footprint.
- However, the findings of this report also bring to light certain gaps and opportunities for further development. Recommendations provided in the audit—such as enhancing energy efficiency through renewable energy sources, improving waste segregation and recycling systems, expanding green cover, and strengthening awareness and participation among students and staff—are vital steps toward making the campus more sustainable and eco-friendly.
- Importantly, this audit is not just a one-time evaluation but should be seen as a continuous process that encourages regular monitoring, reassessment, and improvement of environmental practices. It provides a framework for long-term sustainability planning and supports the integration of environmental consciousness into the academic and administrative culture of the college.
- By implementing the suggested improvements and maintaining a proactive approach toward environmental stewardship, the college can not only enhance its sustainability performance but also serve as a role model for other institutions. Through consistent effort and commitment, the institution has the potential to evolve into a fully green and energy-efficient campus that promotes environmental ethics, education, and responsibility among all its stakeholders.

CERTIFICATION



IGBC Accredited Professional Certificate



CII Certified Professional in Carbon Footprint



CII Certified Professional in LCA

