SIKKIM MANIPAL UNIVERSITY (SMU)

GREEN AUDIT REPORT

2024-2025

Prepared by

EHS ALLIANCE

TABLE OF CONTENT

CERTIFICATE 2
ACKNOWLEDGEMENT 3
DISCLAIMER 4
CONCEPT AND CONTEXT 5
INTRODUCTION 6
OVERVIEW OF THE UNIVERSITY 7
AUDIT PARTICIPANTS 11
EXECUTIVE SUMMARY 12
GREEN AUDIT - ANALYSIS 13
1.1 GENERAL INFORMATION 13
1.2 WASTE MINIMIZATION AND RECYCLING 14
1.3 GREENING THE CAMPUS 15
1.4 WATER AND WASTEWATER MANAGEMENT 16
1.5 ANIMAL WELFARE 17
1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION 17
GREEN INITIATIVES BY CAMPUS 18
RECOMMENDATIONS 20
CONCLUSION 20
REFERENCE 21
ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS 22

CERTIFICATE

EHS alliance

CERTIFICATE

PRESENTED TO

SIKKIM MANIPAL UNIVERSITY (SMU)

5th Mile Tadong Gangtok, East Sikkim -737102

Has been assessed by EHS Alliance for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

GREEN AUDIT

ACADEMIC YEAR 2024 - 25

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

EHS ALLIANCE LLP GURUGRAM

SIGNATURE

01.11.2025
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Sikkim Manipal University, Gangtok for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

First of all, we would like to thank ***Air Vice Marshal (Dr.) Dilip Chandra Agarwal, VSM – Hon'ble Vice Chancellor*** for giving us an opportunity to evaluate the environmental performance of the campus.

We would also like to thank ***Mr. Premendra Mani Pradhan, Deputy Registrar, IQAC SMU,*** for his continuous support and guidance, without which the completion of the project would not have been possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Prof. (Dr) Karma S. Sherpa - ***Registrar***

Dr. Muralidhar V Pai - ***Dean, SMIMS***

Prof. (Dr) G. L. Sharma - ***Director SMIT***

Col. V. S. Yadav (Retd) - ***Head General Services, SMU***

DISCLAIMER

EHS Alliance LLP Audit Team has prepared this report for Sikkim Manipal University based on input data submitted by the representatives of university complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

If you wish to distribute copies of this report external to your organisation, then all pages must be included.

EHS Alliance, its staff and agents shall keep confidential all information relating to your organisation and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.



Signature

LEAD AUDITOR

CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding green auditing, the management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit as below:

INTRODUCTION

Now a days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Green audit is defined as an official inspection of the effects university has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a university /college to determine how and where they are using the most of the energy or water or resources; the institution can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of university /college including the assessment of policies, activities, documents and records.

OVERVIEW OF THE UNIVERSITY

The Sikkim Manipal University (SMU) was established in 1995. It is recognized by the University Grants Commission (UGC) and established under the Sikkim Manipal University of Health, Medical and Technological Sciences Act, 1995, enacted by the Government of Sikkim.
SMU is the first Public-Private Partnership (PPP) initiative in India in the fields of higher education and healthcare services, established with the objective of providing quality education and affordable healthcare services. The University has been instrumental in offering quality education to students from Sikkim, the North-Eastern Region, and other parts of India, while also providing advanced healthcare services at affordable costs through its teaching hospital.

Since its inception, SMU has achieved several significant milestones in academics, research, healthcare, innovation, and community engagement. Today, the University has evolved into a multidisciplinary institution and continues to expand its academic programmes, research initiatives, infrastructure, and national and international collaborations.

The University is supported by highly qualified, experienced, competent, and dedicated faculty members who are committed to ensuring that graduates are equipped with the knowledge, professional skills, ethical values, and practical competencies required to excel in their chosen professions and contribute effectively to society. SMU plays a significant role in contributing to the nation's skilled human resource pool through quality teaching, research, innovation, entrepreneurship, and community outreach. Transparency, merit-based admissions, academic excellence, student-centric learning, and state-of-the-art infrastructure have been the characteristic features of the University since its establishment.

All academic programmes offered by SMU are approved by the respective statutory and regulatory bodies wherever applicable, including the National Medical Commission (NMC), Indian Nursing Council (INC), All India Council for Technical Education (AICTE), University Grants Commission (UGC), and other relevant statutory bodies.

The engineering programmes like B.Tech Computer Science Engineering, B.Tech Civil Engineering and Master of Computer Applications (MCA) (subject to the applicable accreditation cycle and validity period) offered by the University at Sikkim Manipal Institute of Technology (SMIT) have been accredited by the National Board of Accreditation (NBA).

The University has also been accredited with an 'A+' Grade by the National Assessment and Accreditation Council (NAAC), reflecting its commitment to academic excellence, quality assurance, research, innovation, governance, and continuous institutional improvement.

Constituent units of Sikkim Manipal University

SMU operates through two of its main campuses:

Majhitar Campus: Located at Majhitar, Rangopo, Pakyong District, Sikkim.

This campus houses:

Sikkim Manipal Institute of Technology (SMIT)
Centre for Distance and Online Education (CDOE)

Tadong Campus: Located in Tadong, Gangtok District, Sikkim

This campus houses

Sikkim Manipal Institute of Medical Sciences (SMIMS)
Sikkim Manipal College of Nursing (SMCON),
Sikkim Manipal College of Allied & Healthcare Professions (SMCAHP)
Department of Hospital Administration
Department of Medical Biotechnology
Faculty of Humanities, Social Sciences and Liberal Arts

Programmes offered by the university:

Majhitar Campus		
S. No	**Programme Name**	
1	**B. Tech.**	Civil Engineering
		Computer Science & Engineering
		Electronics & Communication Engineering
		Electronics Engineering (VLSI)Design & Technology)
		Electrical & Electronics Engineering
		Mechanical Engineering
		CSE (Artificial Intelligence & Machine Learning)
		CSE (Data Science)
		CSE (IoT & Cyber Security including Blockchain Technology)
		Computer Science & Information Technology
		Computer Science & Technology
2	**M. Tech.**	Computer Science & Engineering (M. Tech)
		Structural Engineering (M. Tech)
		Hydrology & Water Resources Engineering (M. Tech)
3	**B. Sc.**	Physics
		Chemistry
		Mathematics
		Applied Psychology
4	**BPES**	Physical Education and Sports
5	**M. Sc.**	Physics
		Chemistry
		Mathematics
		Applied Psychology
6	**BBA**	Bachelor of Business Administration
7	**MBA**	Master of Business Administration
8	**BCA**	Bachelor of Computer Applications

9	**MCA**	Master of Computer Applications
Tadong Campus		
10	**MBBS**	Bachelor of Medicine, Bachelor of Surgery (MBBS)
11	**MD/MS**	Doctor of Medicine (MD) Master of Surgery (MS)
12	**Nursing**	B. Sc Nursing
		M. Sc Nursing
13	**Physiotherapy**	Bachelor of Physiotherapy (BPT)
		Masters of Physiotherapy (MPT)
14	**Paramedical Courses**	Bachelors in medical Radiology and Imaging Technology
		Bachelors in Anesthesia and Operation Theatre Technology
		Bachelors in medical laboratory science (BMLS)
		Bachelors in Cardiovascular Technology
15	**B. A.**	English
		Political Science
		Sociology
16	**M. A.**	English)
		Political Science
		Sociology
17	**B. Com**	Bachelor of Commerce
18	**M. Com**	Master of Commerce
19	**B. Sc.**	Medical Biotechnology
20	**M. Sc.**	Medical Biotechnology
21	**BHA**	Bachelor Of Hospital Administration
22	**MHA**	Master in Hospital Administration

MISSION | VISION | OBJECTIVES | COREVALUES

VISION

Global Leadership in Human Development, Excellence in Education and Healthcare.

MISSION

Develop professionals of excellent technical calibre in the field of Health Sciences, Engineering, Management and Social Sciences with a humane approach capable of shouldering the responsibility of building the nation and be globally competent.

OBJECTIVES

- To support, promote and undertake the advancement of academics
- To promote use of ICT and modern education technologies
- To encourage research, creation and dissemination of knowledge
- To facilitate extension and community service
- To empower people of Sikkim and contribute to human development in Northeast
- To create environmental and social responsibilities among students and employees
- To ensure steady growth of the University

CORE VALUES

Integrity and Honesty

We conduct ourselves ethically and legally in all situations upholding stakeholder trust.

Committed to Teams, Accountable for Results and Passion to Win

We are passionate about winning and hold ourselves accountable to organizational goals. We believe in teamwork and foster a performance driven culture across the organization.

Achieving Social Impact

We fulfil our responsibility to society, continuously contributing to build a better world.

Respect and Fairness

We trust every individual and treat them with dignity, respect and fairness. We practice open and honest communication at all times.

Excellence through Quality, Innovation and Leadership

We are committed to delivering superior programs and academic services through continuous innovation and leadership at all levels.

AUDIT PARTICIPANTS

On behalf of Sikkim Manipal University

Name	Designation
Air Vice Marshal (Dr.) Dilip Chandra Agarwal (VSM)	*Hon'ble Vice Chancellor, SMU*
Prof. (Dr) Karma S. Sherpa	*Registrar, SMU*
Dr. Murlidhar V. Pai	*Dean, SMIMS*
Prof. (Dr) G. L. Sharma-	*Director, SMIT*
Col. Virender S Yadav (Retd)	*Head, General Services, Sikkim Manipal University*
Col. Surajit Debnath	*HES, SMIT*
Mr. Premendra Mani Pradhan	*Deputy Registrar, IQAC SMU*
Col. D. B. Chhetri (Retd)	*Head Administration, SMIT*
Mr. Sebom Mukherjee	*Dy. Manager (Housekeeping), SMIT*

On behalf of EHS Alliance Services

Name	Position	Qualifications
Dr. Uday Pratap	*Lead Auditor*	*Ph.D., PDIS, QCI – WASH, Lead Auditor ISO 14001:2015*
Ms. Pooja Kaushik	*Co-Auditor*	*M.Sc., Field Expert, QCI – WASH*

EXECUTIVE SUMMARY

A Green Audit is a systematic and comprehensive assessment undertaken to evaluate the environmental performance, resource efficiency and sustainability practices of an institution. It provides a structured mechanism for examining whether institutional activities are being carried out in an environmentally responsible manner and whether natural resources are being utilised efficiently.

Traditionally, natural resources were used with greater care and restraint. However, rapid development, changing lifestyles and increasing dependence on modern infrastructure have resulted in the excessive consumption of water, electricity, fossil fuels and other resources, particularly in urban and semi-urban areas. This growing demand makes it necessary for institutions to periodically assess whether resources are being consumed according to actual requirements, whether avoidable losses are occurring and whether existing practices support long-term environmental sustainability.

In the context of climate change, resource depletion and increasing environmental concerns, institutions have a significant responsibility to adopt sustainable operational practices. A Green Audit supports this objective by establishing a baseline of existing environmental conditions, identifying areas of concern and recommending practical measures for resource conservation, pollution prevention and continual improvement. It also helps standardise environmental practices, strengthen institutional accountability and promote environmental awareness among students, faculty members, employees and other stakeholders.

The present assessment constitutes the fourth Green Audit cycle undertaken for the campus. It has been conducted to support the institution's commitment to environmental sustainability and to facilitate compliance with the applicable requirements of the National Assessment and Accreditation Council (NAAC). The audit provides an objective review of the environmental initiatives, infrastructure and resource-management practices adopted by the institution.

The assessment primarily covered key environmental performance indicators, including electricity consumption, fossil-fuel utilisation, renewable-energy adoption, water consumption, rainwater-harvesting arrangements, soil quality, vegetation and green cover, biodiversity, waste-management practices, sustainable transportation and the carbon footprint of the campus.

As part of the audit process, a structured questionnaire was initially shared with the institution to obtain information regarding the available infrastructure, natural resources, environmental initiatives and resource-consumption patterns of students and staff. The information provided by the institution was subsequently reviewed and supplemented through onsite inspections, stakeholder interactions, examination of available records and analysis of relevant operational data.

The findings and recommendations presented in this report are intended to assist the institution in strengthening its environmental management practices, improving resource efficiency and developing a practical roadmap towards a greener, cleaner and more sustainable campus.

GREEN AUDIT - ANALYSIS

1.1 GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

Yes, this is third external audit organized by the university

2. What is the total strength (people count) of the Institute?

Students
Male: 2334 Female: 1639 Total: 3973
Teachers (including guest faculty)
Male: 306 Female: 293 Total: 599
Non-Teaching Staff
Male: 578 Female: 666 Total: 1244
Total Strength
Male: 3218 Female: 2598 Total: 5816

3. What is the total number of working days of your campus in a year?

There are one hundred and eighty-two working days in a year.

4. Where is the campus located?

The campus is located at 5th Mile Tadong Gangtok, East Sikkim -737102

5. Which of the following are available in your institute?

Garden area	*Available*
Playground	*Available*
Kitchen	*Available*
Toilets	*Available*
Garbage Or Waste Store Yard	*Available*
Laboratory	*Available*
Canteen	*Available*
Hostel Facility	*Available*
Guest House	*Available*

6. Which of the following are found near your institute?

Municipal dump yard	*Not in vicinity of institute*
Garbage heap	*No Garbage heaps*
Public convenience	*Public convenience is available*
Sewer line	*Approximately 4.0 KM sewer line within campus*
Stagnant water	*No stagnant water*
Open drainage	*No*
Industry – (Mention the type)	*No*
Bus / Railway Station	*New Jalpaiguri Railway Station, Bagdogra Airport, SNT Bus Station, Siliguri*
Market / Shopping complex	*Available*

1.2 WASTE MINIMIZATION AND RECYCLING

1. Does your institute generate any waste? If so, what are they?

Yes, Solid waste, Canteen waste, paper, plastic, horticulture, laboratories waste, e-waste, etc.

2. What is the approximate amount of waste generated per day? (in Kg approx.)

Biodegradable waste - 400 Kg
Non-biodegradable waste -30 Kg
Hazardous Waste - 100 Kg (BMW)
Others - 1 Kg

3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)

- *Ban all single-use plastics across the entire campus.*
- *Send leftover food from canteens and messes to local pig farms.*
- *Collect old computers, phones, and servers for recycling.*
- *Clean lab chemicals and waste liquids in the treatment plant.*
- *Run a one-week waste collection drive twice every year.*
- *Turn garden and yard waste into useful compost.*
- *Recycle used paper directly on the campus.*
- *Reuse old packing materials as pots for plants.*

4. Do you use recycled paper in institute?

Yes, SMU uses single sided used paper for rough work, assessment work and prints

5. How would you spread the message of recycling to others in the community?

Following are the ways through which SMU is spreading the awareness about recycling

- *Waste plastic collection drives*
- *Installation of Dustbins for waste plastic collection, e-waste collection and recycling*
- *Tie-ups with authorized e-waste collection agency*
- *Awareness among the Students by Webinars, seminars, Sign Boards, Posters, etc.*

6. Can you achieve zero garbage in your institute? If yes, how?

Not yet achieved. Possible through waste management policy and planning.
1. Minimization of waste production
2. Awareness workshops & trainings for students and faculty on Waste management

1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 92000 SQM areas are developed as Gardens.

2. Do students spend time in the garden?

Yes, students spend around 2-4 Hours during winters.

3. Total number of Plants in Campus?

Plant type with approx. count	
Full grown Trees	*1310*
Small Trees	*550*
Hedge Plants	*73850*
Grass Cover sqm	*990280 Sq ft*

4. Is the campus having any Horticulture Department? (If yes, give details)

Yes, Total 40 staff (maali) deployed in horticulture department

5. How many Tree Plantation Drives organized by campus per annum?

Four Plantation Drives are Organized by campus in the last FY. 25 plants were planted in each plantation drive. Survival rate is more than 80%.

6. Is there any Plant Distribution Program for Students and Community?

Yes, Plantations distribution drives conducted in nearby Villages under Unnat Bharat.

8. Is there any Plant Ownership Program?

No

1.4 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

***Drinking** – 167.79 KL/month*
***Gardening** – 842.80 Kl/month*
***Kitchen and Toilets** – 560.46 KL/month*
***Others** – 70.32 KL/month*
***Hostel** – 5800 KL/Month*
Total = 7441.36 KL/Month

Note: Please note that all calculations have been made on the basis of NBC 2016 norms as university has no water usage records.

To account for sustainable water management practices, a volume of 500 KL of treated wastewater has been deducted from the university's total raw water requirement.

2. How does your institute store water? Are there any water saving techniques followed in your institute?

Underground Tank - 4 Tanks total capacity 5,50,000 Litres
Over Head Tanks - 99 Tanks of capacity 10,00000 litres
Reservoir Tanks - 17,70,000 Litres

Saving Techniques

- *Avoid overflow of water-controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Push taps are installed for water conservation*
- *Water Conservation awareness for new students*
- *Sprinklers usage for gardening and grass cover*

3. Locate the point of entry of water and point of exit of waste water in your institute.

***Entry** – SMU uses spring water and have 5 bore wells as a secondary source*
***Exit**- From Canteen, Toilets, Hostel, bathrooms and Labs through covered drainage which is connected to sewage treatment plant of capacity 480 KLD and 15 KLD of ETP.*

4. Write down ways that could reduce the amount of water used in your institute

Basic ways:

- *Close the taps after usage*
- *Water Conservation awareness for new students*
- *Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage*
- *Push taps are installed to save water*
- *Water recycling and use of sprinklers for gardening*

1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

15-20 dogs, 6-10 Cats, 70+ Squirrels, 10+ monkeys and 100+ Birds are found in campus. A variety of bird's species and other flora and fauna are available, so institute is doing their bit for bio diversity conservation.

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

*Yes, Sikkim Manipal University's **Eco club** actively organizes awareness through various campaigns and activities including seminars, poster competition, etc.*

1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO2 emission from Electricity

(electricity used per year in kWh/1000) x 0.84
4896283 kWh/1000 x 0.84

= 4896283/1000x0.84
= 3476.36 tons

2. LPG/PNG used per year - CO2 emission from LPG/PNG

(LPG/PNG used per year in KG) x 2.99
86400 x 2.99
=86400 x 2.99
=258.34 tons

3. Diesel used per year CO2 emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68
= 518671.12 x 2.68
= 518671.12 x 2.68
=518.67 tons

4. Transportation per year (car) CO2 emission from transportation (Bus and Car)

There are 12 buses, and 22 Cars including other vehicles
*= (12*2*2*224/100) *0.01 + (122*2*2*224/100) *0.02*
=22.40 tons

Total CO2 emission per year is 4275.77 tons

After considering carbon absorption capacity of campus, the total carbon emission is 4191.65 tons per year.

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 1,310 full grown trees and 550 semi grown trees of different species, on the campus spread over 10,07,976 sq ft.

Carbon absorption capacity of one full grown tree 22 kg Co2 Therefore Carbon absorption capacity of 1,310 full-grown trees 1,310 x 22 kg Co2 = 28.82 tons of Co2.

The carbon absorption capacity of a semi-grown trees is 30% of that of full-grown trees. Hence the carbon absorption 550 x 6.8 kg of Co2 = 3.74 tons of Co2

There are approximately Hedge Plants 73,850 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of Co2 where as some others absorb very low level of Co2. In the absence of a detailed scientific study, 200g of Co2, absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is 73,850 x 200 g = 14.77 ton of Co2

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 10,07,976 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 10,07,976 x 365 x 0.1 g Co2 = 36.79 tons Co2 per year.

Total of carbon absorption capacity of the campus is 84.12 tons.

GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - Systematically engage with the 3Rs of environment friendliness (Reduce, Reuse and Recycle).
  - Collect paper waste produced on campus and collaborate with scrap dealers for recycling.
  - Reduce use of paper by supporting digitization of attendance and internal assessment records.
  - Reduce requirement of printed books by updating the e-books and e-journals collection of the SMU library.
  - Take initiatives to spread awareness amongst students about food wastage and ways of minimizing it
  - The habit of reusing and recycling non-biodegradable products
  - Organizing workshops for students on solid waste management.
  - There is ban on single use plastic and plastic crockery in the campus.

- **Liquid Waste Management**
  - Maintain leak proof water fixtures.
  - Minimize the use of water by constructing more Indian style toilets instead of western style toilets.
  - Continued employment of a caretaker to take immediate steps to stop any water leakage through taps, pipes, tanks, toilet flush etc.
  - Reuse of wastewater generated by the Reverse Osmosis (RO) system for gardening purpose.
  - STP & ETP are installed for waste water treatment

- **E-waste Management**
  - SMU has a separate storeroom for the safe storage of electronic waste. After a certain interval of time SMU disposes of the E-waste to concerned agencies through the auction process.

- **Rain water harvesting**
  - Rainwater-harvesting capacity: 2,00,000 litres
  - Systems installed: rooftop harvesting, surface-runoff harvesting, percolation pits, recharge wells and storage tanks
- **Renewable Energy**
  - SMU has installed solar PV (100 KW) on the rooftop of building.
  - SMU is using solar lights for street lights.
  - SMU has installed solar heaters.
  - SMU believes in using cleaner energy such as LED lighting.

- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus

- **Activities Carried out by university**
  - Conducted a plantation drive on August 15, 2024.
  - Celebrated National Sports Day 2025 on August 29, 2024.
  - Hosted a dedicated NSS plantation drive on August 31, 2024.
  - Executed a campus cleanliness drive on September 7, 2024.
  - Organized a tree plantation drive on September 17, 2024.
  - Carried out an additional plantation drive on September 18, 2024.
  - Observed National Energy Conservation Day 2024 on December 13, 2024.
  - Celebrated World Environment Day on June 5, 2025.
  - Promoted eco-friendly transit on World Bicycle Day on June 7, 2025.

RECOMMENDATIONS

- Environmental parameters shall be included in purchase policy to achieve a cradle to grave approach for sustainability.
- SMU should start drip irrigation to save water in campus
- Flow rate of taps should be checked; it should not be more than 2.5 litres/minute. Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Involve lower hierarchy staff in environmental awareness programmes and campaigns.
- More Messages should be displayed at various locations to Aware the People about Energy Savings
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- Borewell permission should be taken from authorised government department
- Car-pooling practices can be adopted by campus to minimize air pollution. Increase in the display of environment-conscious posters/paintings/slogans for spreading awareness amongst students.
- Plant Ownership Program should be initiated – Several Trees should be Planted and owned by Visitors as well as students. The Nameplates should also be displayed near the plants.
- Messages should be displayed at various locations to Aware the Peoples about Energy Savings
- Green building guidelines for future expansion projects of the campus.

CONCLUSION

This audit involves considerable team discussions and meetings with key staff members on a variety of environmental-related topics. The eco club of Sikkim Manipal University promotes conservation of resources.

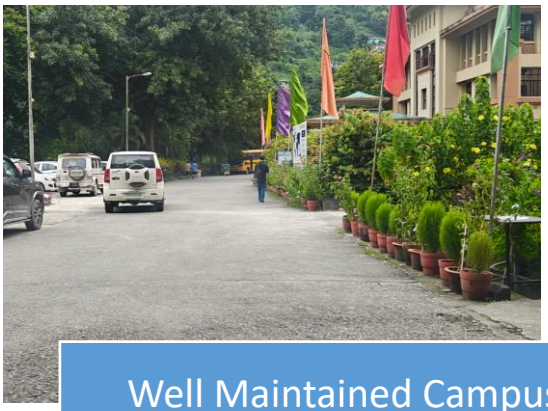
Overall, 60% of Sikkim Manipal University is for landscaping. The SMU makes a significant effort to act in an environmentally responsible manner and takes into account the environmental effects of the majority of its activities. The recommendations in this report suggests some more ways in which SMU can work to improve its practices and develop into a more sustainable institution.

It's important to begin a few things, such as initiating drip irrigation, and increase plantation drives. Additionally, we strongly advise to sign MOU with third party authorised vendors for waste management.

REFERENCE

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS



Well Maintained Campus



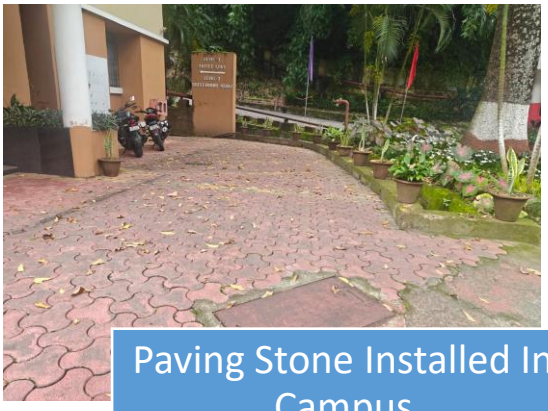
Well Ventilated Campus



Lush Green Campus



Sports Ground



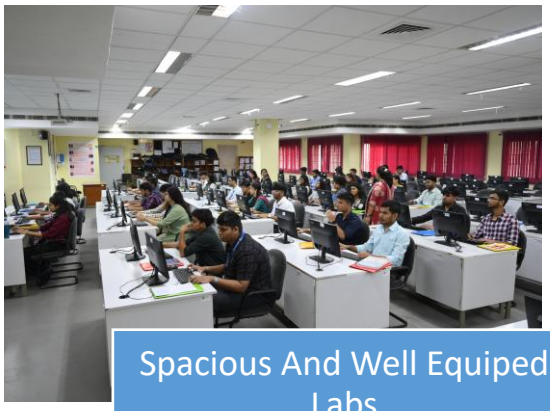
Paving Stone Installed In Campus



Color Coded Dustbins



Classrooms As Per NBC Guidelines With More Than 40% Window Ratio



Spacious And Well Equiped Labs



Indoor Criclet Arena



Spacious Auditorium



Ornamental Plants In Campus



Indoor Plants In Campus



Green House Nursery



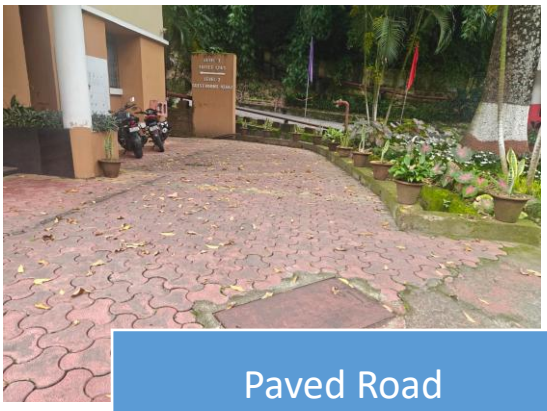
Plantation Drive



Green Corner



Water Coolers



Paved Road



Canteen



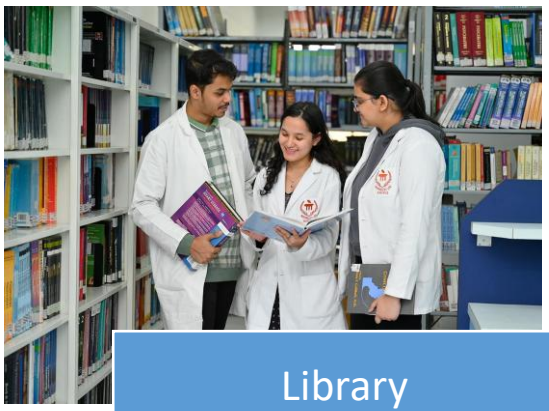
Parking Area



Cafeteria



Indoore Sports Complex



Library



Sports Ground



Solar panel

********** END OF THE REPORT **********