GREEN AUDIT REPORT

for

SWAMI RAMA HIMALAYAN UNIVERSITY

Swami Ram Nagar, Doiwala, Dehradun, 248140, Uttarakhand, India

(Session 2023-24)

Prepared & Submitted By

M/s ECOSCIENCE CONSULTANCY

An ISO 9001, ISO 14001, ISO 45001, ISO 17020 and ISO 50001 certified Company

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DECLARATION – MANAGEMENT SRHU

I, ……, on behalf of Swami Rama Himalayan University (SRHU), do declare & testify that all the data provided are on factual basis as per the available records and the data has been shared in good faith and is not intended for any other purpose other than Green audit.

We would like to express our heartfelt gratitude to the team at Ecoscience Consultancy for taking on this important task. We are confident that the upcoming audit will be conducted with the utmost excellence. Thank you for your dedication and expertise!

Sincerely,

Name:
Designation:
Swami Rama Himalayan University (SRHU)

Declaration by Ecoscience Consultancy

Ecoscience Consultancy, hereby declare that the energy audit report prepared for the "Swami Rama Himalayan University (SRHU)" located at Swami Ram Nagar, Doiwala, Dehradun, Uttarakhand (India) by our team has been reviewed and approved. The expertise and methodologies used for preparing this audit report are of the highest quality and the experts used their know-how to the optimum level. The recommendations and findings in this report can be considered and implemented where feasible to improve the facility's energy efficiency and sustainability.

I affirm that this report has been prepared in good faith and with the intent of achieving significant energy savings and operational improvements. We are committed to making informed decisions based on the expert analysis provided and to continuously enhancing our energy management practices.

Dr. Gurpreet Singh
(Managing Director)
Ecoscience Consultancy

Declaration by Auditors/Experts

We, the undersigned, hereby certify that the Green audit for SRHU has been conducted with utmost diligence and professionalism. The data and findings presented in this report are accurate to the best of our knowledge and are based on standard institutional practices and methodologies. We further certify that the audit complies with all relevant regulations and standards, and the recommendations provided are aimed at improving the environmental and green management for a sustainable future.

Team of Experts for the Study

S. No.	Name of Expert	Area of Expertise	Sign.
1.	**Dr. Gurpreet Singh** (PhD. & M.Tech. in Env. Sc.)	Technical & Environment • Lead Auditor for Green, & Environment management • Air Quality Expert • Environment Sustainability • Carbon Footprint Expert	
2.	**Dr. Avinash Kumar** (PhD., M.Tech. & M.Sc. in Env. Sc.)	Environment Management System • Water Quality Expert. • Pollution Load Assessor. • Carbon Footprint Expert. • Environment Audit Expert.	
3.	**Mr. Navjot Singh** (BE Electrical & specialization in MEP)	Energy & Environment • Energy Auditor • MEP Expert • Engineering Design Expert	

AUDIT CERTIFICATE

PRESENTED TO

Swami Rama Himalayan University

Swami Ram Nagar, Doiwala, Dehradun, Uttarakhand, India

Has been assessed by Ecoscience Consultancy for the comprehensive study of environmental impacts on institutional working framework to full the requirement of

Green Audit

(2023-24)

The green initiatives carried out by the university have been verified and found satisfactory in the report submitted.

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

ECOSCIENCE CONSULTANCY
Lakshmi Vihar Colony, Bahadrabad
Haridwar, Uttarakhand- 249402

Dr. Gurpreet Singh
(Authorized Signatory)
Lead Auditor – Green & Environment Audits

Date: 24/07/2024

CARBON FOOTPRINT CERTIFICATE 2023-24

PRESENTED TO

Swami Rama Himalayan University

Swami Ram Nagar, Doiwala, Dehradun, Uttarakhand, India

Scope of GHG emissions	tCO_2e	%
Direct emissions to air	858	9.4
Indirect emissions from purchased energy	10	0.11
Other indirect emissions	8260	90.4
Total tCO_2e	**9,128**	

ECOSCIENCE CONSULTANCY, Lakshmi Vihar Colony, Bahadrabad, Haridwar, Uttarakhand- 249402

Dr. Gurpreet Singh
(Authorized Signatory)
Lead Auditor – Green & Environment Audits
Ecoscience Consultancy, Uttarakhand

Date: 24/07/2024

Acknowledgement

Ecoscience Consultancy *extends heartfelt gratitude to the Management and Principal/Director of* ***Swami Rama Himalayan University (SRHU)*** *for confiding in us to conduct crucial Green auditing processes during 2023-24. We are honored to have been entrusted with this significant responsibility and are committed to delivering comprehensive and valuable audit results.*

We extend our sincere appreciation to all the participants who played a pivotal role in the auditing process. The unwavering support and active participation of students, faculty, and non-teaching staff were instrumental in gathering essential data through surveys. Their dedication and commitment to the cause of sustainability truly made the auditing journey a success.

We express our gratitude to the diligent office staff who provided invaluable assistance during the document verification phase of the auditing process. Their cooperation and efficiency greatly facilitated the smooth execution of the audit and ensured that all relevant information was accurately recorded.

Green auditing is a collaborative endeavor, and we are humbled to have collaborated with Swami Rama Himalayan University in this transformative journey towards a greener and more sustainable campus. Together, we endeavor to create a positive impact on the environment and foster a culture of environmental consciousness

(Authorized Signatory)

Dr. Avinash Kumar
(Managing Director)
Ecoscience Consultancy

Executive Summary

Executive Summary

The future of humankind depends very much on our ability to change our lifestyles and agree to follow a low consumption pattern of living in terms of resources taken from the globe and return to a sustainable development path at the earliest. The opportunity window for restoring nature to its prolonged state of hosting life forms to flourish under its caring environs is according to scientists, very short and lasting only up to 2030. Within this time, with the willing actions of every citizen wherever they are, coordinated and directed actions should start and continue thereafter till a balancing stage is reached where moderate use of resources and mitigation actions for healing the hurts already inflicted, balance positively to a sustainable nature.

Eco campus is a concept implemented in many educational institutions, all over the world to make them sustainable because of their mass resource utilization and waste discharge in to the environment. SRHU believes that there is an urgent need to address these fundamental environmental problems and reverse the trends. The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution.

Green Auditing of a Higher Education Institution is required as a part of Criterion VII (of the 7 criteria prescribed) under the Guidelines for Submission of the mandatory annual Internal Quality Assurance Report (IQAR) by Accredited Institutions.

It works on the several facets of Green Campus including Water Conservation, Tree Plantation, Waste Management, Paperless Work, and Alternative Energy. With this in mind, the specific objectives of the audit were to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards.

Initially a questionnaire survey was conducted to know about the existing resources of the campus and resource consumption pattern of the students and staff in the college. In order to assess the quality of water and soil, water and soil samples were collected from different locations of the college campus and analyzed for its parameters. Collected data was grouped, tabulated and analyzed. Finally, a report pertaining environmental management plan with strength, weakness and suggestion on the environmental issue of campus is documented.

Chapter - 1

Introduction

Chapter -1

1 About Swami Rama Himalayan University

H.H. Dr. Swami Rama, a great Yogi and a scholar whose yogic feats not only were covered extensively by the media but also found special place in Encyclopedia Britannica 1973, visualized to make health and education available to the people of Uttarakhand. And Swami Rama Himalayan University (SRHU) today stands as a realization of that dream!

Promoted by Himalayan University Hospital Trust (HIHT) SRHU is established under Section 2(f) of UGC Act 1956, enacted vide an Act of Uttarakhand No. 12 of 2013.

The Himalayan Hospital (HH), Himalayan University of Medical Sciences (HIMS), Himalayan College of Nursing (HCN), Himalayan School of Science & Technology (HSST), Himalayan School of Management (HSMS) and Himalayan School of Vocational Studies & Skill Development (HSVSSD) are some of the key constituent Units of the University.

Vision of Swami Rama Himalayan University

"To create internationally competent professionals with a compassionate and caring mindset along with recent skills for respective profession. Further, university is committed towards fulfilling the demands of education and health professionals in the country and globally also."

Mission of Swami Rama Himalayan University

- To develop students into responsible, sincere and highly competent graduates.
- To provide International standard infrastructure manpower and facilities.
- To instill moral and national character among all members of SRHU to create national treasure.
- To utilize all resources for sustainable development of students and overall growth of nearby areas and surroundings.
- To inspire students towards humility, grace and passionate healers, thereby to advance in best practices of patient care.
- To strengthen students to deal with diverse modern lifestyle challenges and to lead higher order of livelihood.

Table 1.1. Location details of the project

S. No.	Particulars	Details

a)	Location	*Swami Rama Nagar, Doiwala*
b)	District	Dehradun
c)	State	Uttarakhand
d)	Coordinates	Lat.: 30°11'26.98''N; Long.: 78°10'03.03''E
e)	Elevation	554 m amsl

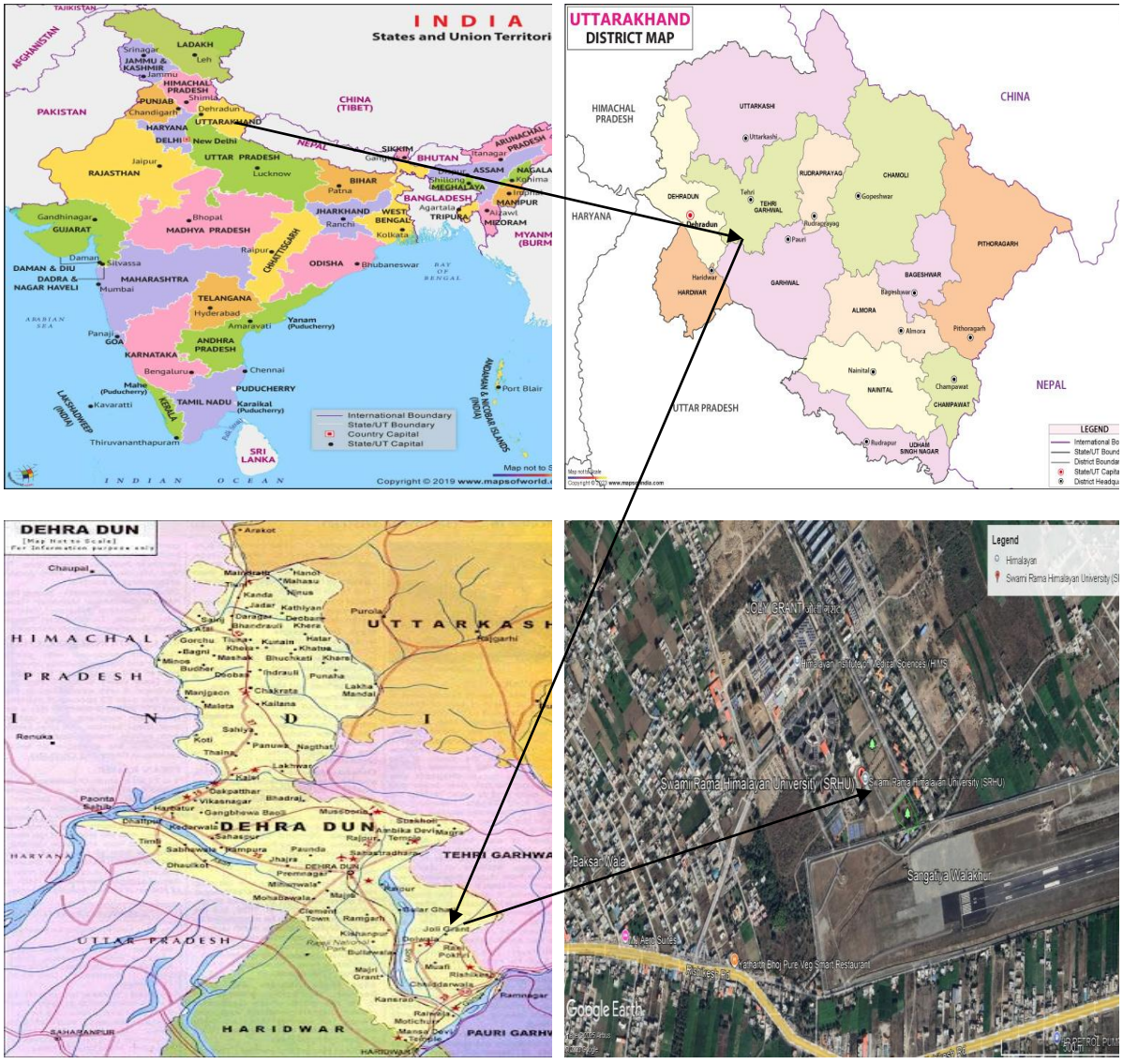

Figure 1.1. Location map of the SRHU

Figure 1.2. Photographs of the SRHU

1.1 About Green Audit

Climate change and its impact, has brought into focus the need for environmental protection as a global agenda. It has emerged as the pillar for sustainable development of the world. The UN Sustainable Development Goals (SDG's) are an important step in ensuring nation's responsiveness towards environmental protection. The Legal and the policy framework of the country have incorporated many environmental measures, involving all stakeholders in the mission. In this context, the Educational Institution has been responsible and responsive in implementing green practices, such as green plantation, rain water harvesting structures, solid waste management, liquid waste management, e-waste management, solar powered campus, energy conservation etc.

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 of the university decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices taken by university, which impact directly or indirectly on the environment.

Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze the environmental practices within and outside the institutional campus, which will have an impact on the eco-friendly ambience. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. Through Green Audit, one gets a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment. This audit focuses on the Green Campus, Waste Management, Water Management, Environmental Management, Energy Management & Carbon Footprint etc. being implemented by the institution. The term 'Environmental Audit' or 'Green Audit' is defined by the International

Chambers of Commerce (ICC) as *"A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations / projects."*

1.1.1 Objectives of Green Audit

Environmental Impact Assessment

Green Audit enables institutions to assess the impact of their activities on the environment, both within the campus and its external surroundings.

Risk Mitigation

By identifying potential risks to the health of inhabitants and the environment, institutions can take necessary actions to minimize or eliminate these risks.

Direction for Improvement

The findings from the Green Audit provide institutions with valuable insights into how they can enhance their environmental practices and contribute to sustainability.

Compliance and Self-Monitoring

Green Audit serves as a means of internal monitoring, enabling institutions to adhere to environmental regulations and guidelines while holding themselves accountable for their environmental performance.

Promoting an Eco-Friendly Ambience

By adopting eco-friendly practices suggested by the Green Audit, educational institutions can create a positive impact on the overall environmental health and contribute to a cleaner, greener future.

The specific objectives are:

- To assess the quality of the water and soil in the university
- To monitor the energy consumption pattern of the university
- To quantify the liquid and solid waste generation and management plans in the campus.
- To assess the carbon foot print of the campus
- To assess whether the measures implemented by the university have helped to reduce the Carbon Footprint.

- To impart environment management plans of the university
- Providing a database for corrective actions and future plans.
- To assess whether extracurricular activities of the Institution support the collection, recovery, reuse and recycling of solid wastes.
- To identify the gap areas and suggest recommendations to improve the Green Campus.

1.1.2 Benefits of Green Auditing

Green Audit offers numerous benefits for educational institutes that go beyond just environmental improvements. Here are some key advantages:

Environmental Impact Assessment

Green Audit provides a comprehensive evaluation of an university's environmental impact. It helps identify areas where the university may be contributing to pollution or environmental degradation, allowing for targeted measures to reduce negative effects.

Resource Conservation

By analyzing energy consumption, water usage, and waste generation, Green Audit helps educational institutes identify opportunities for resource conservation. Implementing energy-efficient practices and waste reduction strategies not only benefit the environment but also lead to cost savings.

Enhanced Sustainability

Green Audit promotes sustainable practices within the university. By adopting eco-friendly measures, educational institutes can reduce their ecological footprint and become more environmentally responsible.

Improved Air and Water Quality

Addressing issues identified through the Green Audit can lead to better air and water quality within the campus, benefiting the health and well-being of students, staff, and visitors.

Compliance and Legal Requirements

Many regions have environmental regulations and standards that organizations, including educational institutes, must adhere to. Green Audit helps institutions ensure compliance with these laws and guidelines.

Positive Image and Reputation

Demonstrating a commitment to environmental responsibility through Green Audit can enhance an university's reputation and attract environmentally conscious students, staff, and stakeholders.

Educational Opportunities

Green Audit can be an educational experience for students and staff. It raises awareness about environmental issues and encourages sustainable behaviors both within the campus and in daily life.

Encourages Research and Innovation

Green Audit may uncover unique challenges specific to the university's location or operations, prompting research and innovative solutions to address those issues.

Cost Savings

Sustainable practices identified during the Green Audit can lead to significant cost savings over time, reducing operational expenses for the university.

Long-Term Planning

Green Audit provides valuable data that aids in the formulation of long-term environmental strategies and goals for the university. It enables institutions to set targets for continuous improvement.

Community Engagement

Educational institutes can engage with the local community by sharing their green initiatives and encouraging sustainable practices beyond the campus boundaries.

Contribution to National and Global Goals

By embracing sustainability through Green Audit, educational institutes actively contribute to national and global environmental goals, supporting initiatives like the United Nations' Sustainable Development Goals (SDGs).

In conclusion, Green Audit offers a wide range of benefits for educational institutes, including environmental improvements, resource conservation, cost savings, and enhanced reputation. By conducting regular Green Audits, educational institutions can play a significant role in promoting sustainability and becoming responsible stewards of the environment.

1.1.3 Target Areas of Green Audit

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

All these indicators are assessed in the process of "Green Auditing of this educational university". Eco-campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the university's energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all contracts and services considered to have significant environmental impacts. The target areas included in this green auditing are

- Water Resource management,
- Waste management,
- Green campus management
- Environment management
- Health and Safety management
- Carbon footprint management

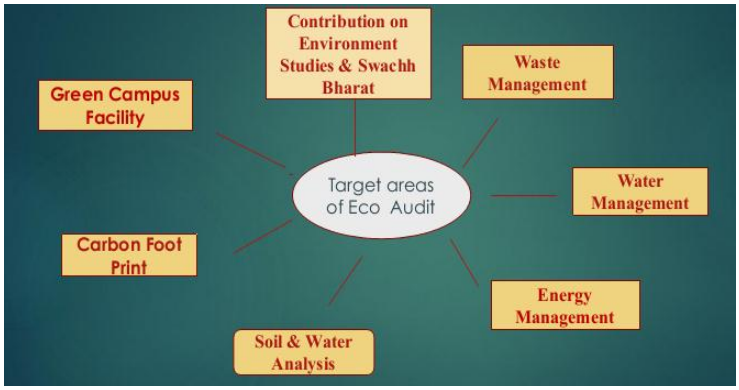

Figure 1.3. Targets of the Green Audit

1.2 Auditing for Water Management

Water, a precious natural resource, is indispensable for all living organisms. While it is abundant in many natural environments, ensuring access to potable (drinkable) water in human settlements, including educational institutes, presents challenges. The increasing rates

of groundwater depletion and water contamination highlight the urgent need to assess the quality and usage of water within educational institutions. Water auditing emerges as a crucial tool to evaluate water facilities, intake, treatment, and reuse strategies. By conducting water audits, educational institutes can effectively balance water demand and supply, contributing to sustainable water management.

Water Auditing

Evaluating Water Resources and Usage Water auditing is a systematic process that assesses the water resources available to an educational university and examines its water usage patterns. The primary objectives of water auditing include:

Assessing Water Intake

Water auditing evaluates the sources and quantity of raw water intake by the university. This helps in understanding the availability of water resources and potential vulnerabilities.

Evaluating Water Treatment

The audit investigates the water treatment facilities in place to ensure the supply of safe and potable water to the university. Identifying any shortcomings in the treatment process aids in maintaining water quality.

Exploring Water Reuse Opportunities

Water auditing explores opportunities for reusing water within the university, such as recycling wastewater for non-potable purposes. This promotes efficient water usage and reduces the strain on freshwater resources.

Balancing Water Demand and Supply

By analyzing water usage patterns, the audit assists in identifying areas of excessive water consumption and suggests measures for optimizing water use to meet the university's needs sustainably.

Identifying Water Conservation Measures

Water auditing recommends water conservation measures and efficient water management practices, contributing to a reduction in water wastage.

Mitigating Water Contamination Risks

The audit also investigates potential sources of water contamination within the campus, helping to safeguard water quality and the health of the university's occupants.

Water audit has following specific advantages as

- Water audits provide decision making tools to utility managers, directors, and operators. i.e., knowing where water is being used in your system allows you to make informed decisions about investing resources such as time, labour and money.
- Water audits allow managers to efficiently reduce water losses in the system.
- Reducing water used at the source may even result in delaying or avoiding capital investments such as a new well, more treatment technology or additional water rights.
- Water audits also identify which water uses are earning revenue for the utility and which water uses are not. Thus, System personnel can increase revenue by university ensuring all appropriate uses are being accurately measured and billed. This leads to more financial capacity in the water system, reduced cost per customer and better management of the water resource.
- Creating awareness among water users i.e., customers can see and understand that the utility is taking proactive steps to manage wasted water and save for the future.
- It is an effective educational and public relations tool for the water system.

1.3 Auditing for Waste Management

Embracing sustainable waste management practices is crucial for educational institutes to minimize their environmental impact and contribute to a cleaner, healthier future. By adopting responsible waste handling and disposal methods, such as recycling, composting, and proper disposal of hazardous waste, institutes can significantly reduce their waste footprint. Human activities inevitably produce waste, and how these wastes are handled, stored, collected, and disposed of can have significant implications for the environment and public health. Improper waste management results in pollution, unsightly litter, and potential health hazards in our communities. To address these challenges, it is essential to classify waste into distinct categories: bio-degradable, non-biodegradable, and hazardous waste. Each type requires specific handling and disposal methods to minimize its impact on the environment.

Bio-degradable Waste Management

Bio-degradable wastes include organic matter such as food waste, canteen waste, and toilet waste. Effective management of bio-degradable waste is critical to reducing its harmful impact on the environment. Institutes can adopt sustainable methods like anaerobic digestion to convert bio-degradable waste into energy or utilize composting technology to transform it into nutrient-rich fertilizer. These practices not only minimize waste but also contribute to renewable energy generation and support sustainable agriculture.

Non-Biodegradable Waste Management

Non-biodegradable wastes, including plastics, tins, and glass bottles, are commonly disposed of in homes and schools. Instead of adding to the growing problem of waste accumulation, these materials can be effectively managed through recycling and reuse initiatives. Educational institutes can play a crucial role by promoting waste segregation, providing recycling bins, and collaborating with recycling facilities to ensure the proper handling and treatment of non-biodegradable waste.

Hazardous Waste Management

Hazardous waste poses a significant threat to both human health and the environment. It includes items like cleaning chemicals, acids, and petrol. Special attention should be given to the handling, storage, and disposal of hazardous waste to prevent contamination and potential health risks. Institutes must implement strict protocols and collaborate with authorized agencies for the safe disposal of hazardous waste materials.

Environmental Impact and Climate Change

Improper waste management practices, such as dumping waste in pits or burning them, can have severe consequences. Contaminants discharged into soil and water supplies can pollute ecosystems and harm wildlife. Additionally, burning waste contributes to greenhouse gas emissions, exacerbating global climate change. Sustainable waste management practices are essential to mitigate these negative impacts and promote environmental stewardship.

1.4 Auditing for Green Campus Management

The presence of trees within urban environments, especially on educational campuses, is more than just ornamental; it is an essential ecological investment. Trees serve as guardians of public health, purifying the air, reducing carbon emissions, and creating a serene atmosphere for the entire campus community. Embracing a sustainable approach to preserve and expand the green

cover of our campuses will not only improve the quality of education but also demonstrate our commitment to a healthier, greener, and more harmonious coexistence with nature.

Trees are invaluable assets within urban environments, offering a multitude of benefits ranging from supporting ecological balance to enhancing public health and beautifying cities. Their presence on educational campuses is particularly advantageous, as they contribute significantly to the well-being of students, faculty, and staff. Understanding the ecological role of trees and their impact on air quality is crucial to appreciate their invaluable contributions.

Carbon Dioxide Absorption and Oxygen Release

Mature trees serve as natural carbon sinks, absorbing carbon dioxide from the atmosphere during photosynthesis. In just one year, a single mature tree can absorb up to 48 pounds of carbon dioxide, mitigating its harmful effects on the environment. Through this process, trees help combat climate change and reduce the overall carbon footprint of the campus and the surrounding area. Furthermore, during photosynthesis, trees release oxygen, making the air fresher and more conducive to human health.

Improved Air Quality and Public Health

The collective effort of trees on campus significantly improves air quality. By absorbing carbon dioxide and releasing oxygen, trees help reduce air pollution and enhance the overall health of individuals within the campus community. Clean and fresh air has been linked to various health benefits, such as reduced stress, improved respiratory function, and enhanced mental well-being, which positively impact the learning and working environments.

Aesthetic and Psychological Benefits

Beyond their ecological significance, trees provide aesthetic benefits that uplift the ambiance of educational campuses. Their greenery and natural beauty create a welcoming and tranquil environment, which can positively influence the mental and emotional well-being of students and staff. The calming effect of trees amidst the hustle and bustle of urban life fosters a sense of connection to nature and promotes overall campus happiness.

Campus Trees - Allies in Your Pursuit of Academic Excellence

While students and staff devote themselves to academic pursuits, the trees on campus silently contribute to their success by purifying the air and creating a healthier environment. Their tireless efforts in absorbing carbon dioxide and releasing oxygen serve as a constant reminder

of the invaluable partnership between humans and nature. By nurturing and preserving these vital green resources, educational institutes can empower their communities to become responsible stewards of the environment.

Auditing for Carbon Footprint

Carbon emissions arising from vehicular traffic have significant implications for the environment, contributing to climate change and related environmental issues. By assessing transportation practices and promoting sustainable alternatives, educational institutes can play a vital role in reducing their carbon footprint and leading the way towards a more sustainable future. As stewards of knowledge and agents of change, educational institutes must take the initiative to address carbon emissions and prioritize sustainable transportation to create a greener and healthier campus environment for generations to come.

The burning of fossil fuels, such as petrol, has a significant environmental impact due to the emission of greenhouse gases into the atmosphere. Among the most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide, and ozone. Of these, carbon dioxide stands out as the most prominent, comprising a staggering 402 parts per million (ppm) of Earth's atmosphere. The release of carbon dioxide and other greenhouse gases through human activities is collectively known as carbon emissions. Within the campus environment, vehicular emissions emerge as the primary source of carbon emissions, making it imperative to assess and address transportation practices for sustainable environmental stewardship.

Understanding Carbon Emissions of Campus

Carbon emissions from vehicular traffic contribute significantly to greenhouse gas concentrations, contributing to climate change and environmental degradation. As carbon dioxide is a major culprit, steps must be taken to reduce its release and minimize its impact on the atmosphere.

Assessing Transportation Practices

To curb carbon emissions on campus, it is crucial to thoroughly assess transportation methods practiced within the university. This involves evaluating the number of fossil fuel-powered vehicles, their frequency, and distances traveled. Additionally, understanding the proportion of carpooling, public transportation use, cycling, and walking provides insights into the

university's overall carbon footprint and the potential for sustainable transportation alternatives.

Promoting Sustainable Transportation Solutions

To mitigate carbon emissions, educational institutes must actively promote sustainable transportation solutions among students, faculty, and staff. Encouraging the use of public transport, carpooling, cycling, and walking not only reduces individual carbon footprints but also fosters a culture of environmental responsibility. Providing convenient access to public transportation, bicycle racks, and pedestrian-friendly pathways further supports sustainable commuting practices.

Investing in Green Transportation

Embracing greener alternatives for campus transportation is essential in combating carbon emissions. Investing in electric or hybrid vehicles for official use and encouraging the adoption of electric vehicle charging infrastructure on campus demonstrates a commitment to reducing the university's carbon footprint and leading by example.

Raising Environmental Awareness

Educational institutes hold a unique position to raise environmental awareness among their campus communities. By educating students and staff about the environmental consequences of carbon emissions and the importance of sustainable transportation, institutes can inspire positive behavioral changes and promote a greener and more eco-conscious campus culture.

Chapter – 2

Methodology Adopted for Green Audit

Chapter 2

2 Methodology Adopted for Green Audit

The methodology adopted for this audit is comprising of following process steps as

2.1 Data Collection

In preliminary data collection phase, exhaustive data collection was performed using different tools such as observation, survey communicating with responsible persons and measurements.

Following steps are taken for data collection:

- The team approaches to each department, centre, library and canteen etc.
- Data about the general information is collected by observation and interview.
- The power consumption of appliances is recorded by taking an average value in some cases.

In addition to the above, the university was evaluated through questionnaire circulated among the students for data collection. Five categories of questionnaires were distributed.

2.2 Onsite Visit

One-day site visit was conducted by the Experts of Green Audit Team of Ecoscience Consultancy. The key focus of the visit was on assessing the status of the green cover of the Institution, their waste management practices and energy conservation strategies etc.

Focus Group Discussion

The Focus Group discussions were held with the high committee members, staff members and the management focusing various aspects of Green Audit. The discussion was focused on identifying the attitudes and awareness towards environmental issues at the institutional and local level.

Energy, waste management and Carbon foot print analysis Survey

With the help of teachers and students, the audit team has assessed the energy consumption pattern and waste generation, disposal and treatment facilities of the university. The monitoring was conducted with a detailed questionnaire survey method.

2.3 Data Analysis

Detailed analysis of data collected including Illumination/lux levels, noise levels, heat stress (temp, humidity) and air quality, water quality, waste generation its management, calculation of energy consumption, analysis of latest electricity bill of the campus, understanding the tariff plans provided by state Electricity Board. Data related to water consumption/demand, treatment and disposal are also analyzed using appropriate methodology.

2.4 Recommendation

On the basis of results of data analysis and observations, the options/ steps for reducing/optimizing use of power, water consumption, waste generation and management can be recommended. Green management including plantation drives, use of renewable energy sources and reduction in use of fossil fuels and carbon footprint can also be suggested for the sake of community health and environmental protection.

2.5 Process for Green Audit

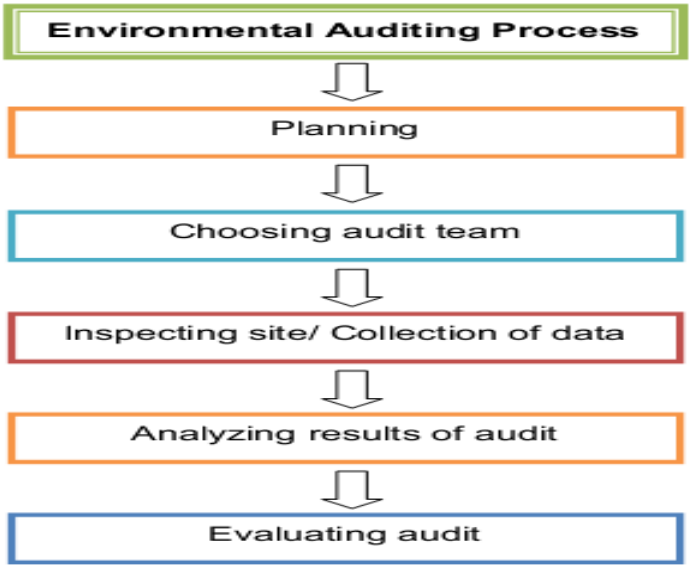

Figure 2.1. Process adopted for Green Audit

2.6 Air Quality Index (AQI)

Air Quality Index (AQI) transforms complex air quality data of criteria pollutants into a single number (index value), with nomenclature and colour. AQI was launched on 17 October 2014 in India to disseminate information on air quality in an easily understandable form for the general public. AQI has six categories of air quality which are defined as Good, Satisfactory, Moderately

Polluted, Poor, Very Poor and Severe. AQI is considered as 'One Number- One Colour-One Description' for the common man to judge the air quality within his vicinity. The formulation of the index was an initiative under ***Swachh Bharat Mission (cleanliness Mission)***, based on the recommendations of IIT Kanpur and the Expert Group formed in this regard. The earlier measuring index in this regard was limited to three indicators, while the current measurement index had been expanded with five additional parameters. The measurement of AQI is based on following pollutants, namely

- Particulate Matter (size less than 10 µm) or (PM_{10}),
- Particulate Matter (size less than 2.5 µm) or ($PM_{2.5}$),
- Nitrogen Dioxide (NO_2),
- Sulphur Dioxide (SO_2),
- Carbon Monoxide (CO),
- Ozone (O_3) and
- Ammonia (NH_3),

Table 2.1. AQI ivalues an their associated health impacts

AQI	Associated Health Impacts
Good (0–50)	Minimal Impact
Satisfactory (51–100)	May cause minor breathing discomfort to sensitive people.
Moderately polluted (101–200)	May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults.
Poor (201–300)	May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease
Very Poor (301–400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
Severe (401-500)	May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity.

Methodology of AQI

The ambient air quality has been assessed through scientifically designed ambient air quality

monitoring network. The monitoring network was designed based on the following considerations:

- Meteorological conditions
- Geographical conditions
- Topography of the area
- Likely impacts and sensitive receptors

To overview the air quality in SRHU campus, we have established an ambient air quality monitoring network in accordance with the Central Pollution Control Board (CPCB) guidelines. The monitoring network utilizes the triangular method with three sampling locations oriented at 120-degree angles from each other. This approach enables comprehensive and accurate data collection, allowing us to assess the ambient air quality in real-time.

Compliance with CPCB Guidelines: Our commitment to environmental responsibility is reflected in our adherence to the CPCB guidelines for ambient air quality monitoring. By strictly following these guidelines, we ensure that our monitoring practices meet the highest standards of accuracy and reliability.

Continuous 24-Hour Monitoring: To capture a comprehensive picture of the ambient air quality, our monitoring is conducted on a 24-hour basis at each identified location. Simultaneous monitoring at all locations enables us to gather real-time data and identify any temporal variations in air quality. This approach provides us with a more holistic understanding of the air quality patterns and any potential pollution sources.

Triangular Method for Optimal Sampling: The triangular method for establishing our monitoring network ensures a strategic and well-distributed sampling approach. By placing the three sampling locations at 120-degree orientations, we maximize the coverage of the campus area, accounting for potential variations in air quality across different regions.

Data-Driven Decision Making: The data collected through our ambient air quality monitoring network serves as a foundation for informed decision-making. This valuable information enables us to identify air quality trends, assess the effectiveness of existing pollution control measures, and develop targeted strategies for further improvement.

Parameters & Methods of Air Quality Monitoring

Test methods for determining Various Air Quality Parameters are described in below **Table 2.2**

Table 2.2. Test methods for determination of Air Quality Parameters

S. No.	Test Parameter	Test Method
1.	Particulate Matter (PM_{10})	IS:5182 (P-23) 2006 RA 2017
2.	Particulate Matter ($PM_{2.5}$)	Lab SOP EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2) 2001 RA 2017
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6) 2006 RA 2017
5.	Ammonia (NH_3)	Lab SOP EL/SOP/AAQ/02
6.	Ozone (O_3)	IS:5182 (P-9):2006 RA 2014
7.	Carbon Monoxide (CO)	IS 5182 Part-10:1999, RA 2014

Sampling Procedure

To comprehensively assess the air quality at our institution, we have employed cutting-edge particulate and gaseous sampling techniques. The sampling process utilizes state-of-the-art equipment from Ecotech and Horiba, ensuring accurate and reliable data collection. Particulate Matter (PM10 and PM2.5) samples are collected on specialized Whatman filters, while gaseous samples (CO and Benzene) are collected using advanced Gas Samplers and activated carbon absorber tubes, respectively.

Particulate Sampling Methodology:

For PM_{10}, we utilize the respirable dust sampler (AAS 217NL, Ecotech) in conjunction with Whatman glass fiber filters. The laminar flow is maintained at a rate of 1.13 m^3 per minute during sampling, ensuring precise collection of particulate matter. Similarly, for $PM_{2.5}$, the fine particulate sampler (AAS 127Mini, Ecotech) is employed with Whatman Quartz filter papers (47 mm diameter). A laminar flow of 16.7 liters per minute (1.0 m^3 per hour) is maintained during PM2.5 sampling. Both PM_{10} and $PM_{2.5}$ samples are collected on a 24-hour basis at a nominal sampling height of 3 meters at each location.

Gaseous Sampling Technique:

For gaseous pollutants (CO and Benzene), we use the Thermoelectrically cooled Gas sampler

(AAS 109TE, Ecotech) to ensure accurate and reliable collection. CO samples are collected in tedlar bags for subsequent analysis using the NDIR CO Analyzer (APMA-370, Horiba). On the other hand, Benzene is collected in activated carbon absorber tubes, which are then subjected to GC analysis for precise measurements.

Construction of Air Quality Index (AQI)

- Based on the measured ambient air concentrations, corresponding standards and likely health impact (known as health breakpoints), a sub-index is calculated for each of the pollutants.
- A sub-index is a linear function of concentration e.g. the sub-index for $PM_{2.5}$ will be
  - 51 at concentration 31 µg/m^3,
  - 100 at concentration 60 µg/m^3, and
  - 75 at concentration of 45 µg/m^3
- The formula for calculating a sub-index is as follows:

  Sub Index for a pollutant = Upper limit of the previous AQI category to which the pollutant's current reading would have fallen **+**[(current reading **–** upper limit of the previous reading category of the pollutant)***** (width or interval of the AQI category for the current level of reading **/** width or interval of the current reading category of the pollutant)]

  Eg. Sub-index for $PM_{2.5}$

  If concentration is 150 µg/m3, sub index would be = 300+[(150-120)*100/130] = 323

  If concentration is 45 µg/m3, the sub index would be = 30+[(45-30)*50/30] = 75

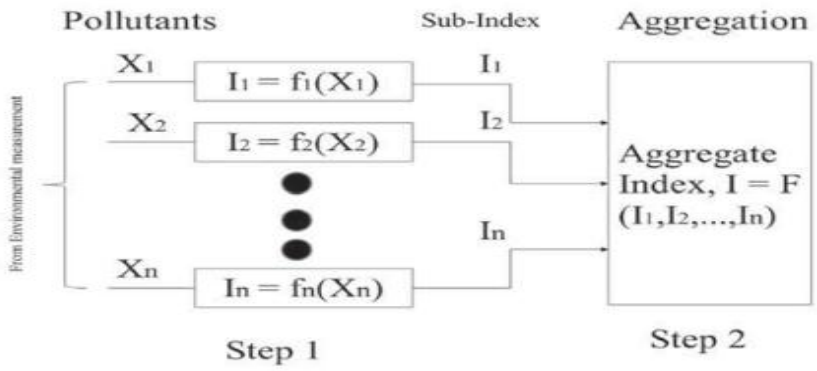

Figure 2.2. Index and Sub-index of Pollutants

- Primarily two steps are involved in formulating an AQI: (i) formation of sub-indices (for each pollutant) and (ii) aggregation of sub-indices to get an overall AQI.
- Formation of sub-indices (I1, I2,...., In) for n pollutant variables (X1, X2...., Xn) is carried out using sub-index functions that are based on air quality standards and health effects. Mathematically;

  $I = f(Xi), i=1, 2,...,n$ [Eq. 1]
- Each sub-index represents a relationship between pollutant concentrations and health effect as the functional relationship between sub-index value (Ii) and pollutant concentrations (Xi).
- Aggregation of sub-indices, Ii is carried out with some mathematical function (described below) to obtain the overall index (I), referred to as AQI.

  $I = F(I1, I2, ...,In)$ [Eq. 2]
- The aggregation function usually is a summation or multiplication operation or simply a maximum operator.

Sub-indices (Step 1)

- Sub-index function represents the relationship between pollutant concentration Xi and corresponding sub index Ii. It is an attempt to reflect environmental consequences as the concentration of specific pollutant changes. It may take a variety of forms such as linear, non-linear and segmented linear. Typically, the I-X relationship is represented as follows:

  $I = aX + ß$ [Eq. 3]

  Where, a =slope of the line, ß = intercept at X=0
- The general equation for the sub-index (Ii) for a given pollutant concentration (Cp); as based on 'linear segmented principle' is calculated as:

  $Ii = [\{(IHI-ILO)/(BHI-BLO)\}*(Cp-BLO)]+ILO$ [Eq. 4]

  Where,

  BHI = Breakpoint concentration greater or equal to given concentration.

  BLO = Breakpoint concentration smaller or equal to given concentration.

IHI =AQI value corresponding to BHI

ILO = AQI value corresponding to BLO

Ip = Pollutant concentration

Aggregation of Sub-indices (Step 2)

- Once the sub-indices are formed, they are combined or aggregated in a simple additive form or weighted additive form:

Weighted Additive Form

- I = Aggregated Index = $\sum WiIi$ (For i= 1, …..,n) [Eq. 5]

where,

$\sum Wi = 1$

Ii = sub-index for pollutant i

n = number of pollutant variables

Wi = weightage of the pollutant

Root-Sum-Power Form (non-linear aggregation form)

- I = Aggregated Index = $[\sum Iip](1/p)$ [Eq. 6]

where,

p is the positive real number >1

Root-Mean-Square Form

- I = Aggregated Index = {1/k (I12+I22+……. + Ik2)}0.5 [Eq. 7]
- Finally; AQI = Max (Ip) (where; p= 1,2,…..,n; denotes n pollutants)
- The AQI values and corresponding ambient concentrations (health breakpoints) for the identified eight pollutants are as follows:

Table 2.3. AQI Category, Pollutants and Health Breakpoints

AQI Category (Range)	Categories for various readings of pollutant based on health breakpoints/health impacts						
	PM_{10}	$PM_{2.5}$	NO_2	O_3	CO	SO_2	NH_3

	24-hr	24-hr	24-hr	8-hr	8-hr	24-hr	24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+

***One hourly monitoring (for mathematical calculations only)**

Calculator for Air Quality Index (AQI)

- For manual monitoring stations, an AQI calculator is developed by CPCB wherein data can be fed manually to get AQI value.
- The excel sheet for calculating AQI, as uploaded by CPCB

Interpretation of Air Quality Index (AQI)

- The worst sub-index reflects overall AQI

  For instance, if the sub index of $PM_{2.5}$ =75, SO_2 = 63, NO_2 =38 then the AQI will be 75 which is the same as the value of the sub index of $PM_{2.5}$.

- The Sub-indices for individual pollutants at a monitoring location are calculated using
  - ✓ 24-hourly average concentration value (8-hourly in case of CO and O_3)
  - ✓ Health breakpoint concentration range (e.g. AQI at 6 am on a day will incorporate data from 6am on previous day to the current day).
  - ✓ AQI is calculated by eight pollutants however, overall AQI can be calculated with available data for minimum three pollutants out of which one should necessarily be either $PM_{2.5}$ or PM_{10}.
  - ✓ Minimum of 16 hours' data is considered necessary for calculating sub index
  - ✓ AQI index values can vary depending on the time of the day.

- ✓ AQI reflects the status of the worst pollutant in that city. i.e. higher reading in one city can be due to high concentration of PM whereas in some other city it may be due to SO_2.
- ✓ If one pollutant out of eight is in the "poor" category, then AQI will be in "poor" category.

2.7 Auditing for Water Resource Management

Water, a precious natural resource, is indispensable for all living organisms. While it is abundant in many natural environments, ensuring access to potable (drinkable) water in human settlements, including educational institutes, presents challenges. The increasing rates of groundwater depletion and water contamination highlight the urgent need to assess the quality and usage of water within educational institutions. Water auditing emerges as a crucial tool to evaluate water facilities, intake, treatment, and reuse strategies. By conducting water audits, educational institutes can effectively balance water demand and supply, contributing to sustainable water management.

Figure 2.3. Process adopted for Auditing of Water Resource Management

2.8 Auditing for Carbon Footprint

Carbon emissions arising from vehicular traffic have significant implications for the environment, contributing to climate change and related environmental issues. By assessing transportation practices and promoting sustainable alternatives, educational institutes can play a vital role in reducing their carbon footprint and leading the way towards a more sustainable future. As stewards of knowledge and agents of change, educational institutes must take the initiative to address carbon emissions and prioritize sustainable transportation to create a greener and healthier campus environment for generations to come. The burning of fossil fuels, such as petrol, has a significant environmental impact due to the emission of greenhouse gases into the atmosphere. Among the most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide, and ozone. Of these, carbon dioxide stands out as the most prominent, comprising a staggering 402 parts per million (ppm) of Earth's atmosphere. The release of carbon dioxide and other greenhouse gases through human activities is collectively known as carbon emissions. Within the campus environment, vehicular emissions emerge as the primary source of carbon emissions, making it imperative to assess and address transportation practices for sustainable environmental stewardship.

Carbon Footprint

The measurement of all greenhouse gas emissions that are discharged into the atmosphere is known as the carbon footprint. These emissions are the result of decisions and deeds made by a person, a business, or a government. Carbon footprint is calculated as the "Carbon Dioxide Equivalent" or "CO_2e" of all carbon dioxide emissions. The term "Carbon Dioxide Equivalent" or "CO_2e" is used to group various greenhouse gases into a single quantity. The amount of CO_2e that would have the same effect on global warming for any quantity and kind of greenhouse gas. By multiplying the amount of a GHG by its Global Warming Potential (GWP), a GHG's amount can be represented as CO_2 e.

E.g. If 1 kg of methane with a 25-fold GWP is released, this can be transcribed into 25 kg of CO2e. (1kg CH_4 x 25 = 25kg CO_2e).

The first step in reducing emissions and the harm they cause at any level—global, regional, national, organizational, household, and individual—is to understand the GHGs and their emissions, sources and sinks. The purpose of the report is to comprehend greenhouse gas assessments (also known as carbon footprint assessments) and perform them to lessen the effects of climate change on the environment, natural resources, and people.

Understanding Carbon Emissions of Campus

Carbon emissions from traffic contribute significantly to greenhouse gas concentrations, contributing to climate change and environmental degradation. As CO_2 is a major culprit, steps must be taken to reduce its emission and minimize its impact on the atmosphere.

Assessing Transportation Practices

To curb carbon emissions on campus, it is crucial to thoroughly assess transportation methods practiced within the university. This involves evaluating the number of fossil fuel-powered vehicles, their frequency, and distances traveled. Additionally, understanding the proportion of carpooling, public transportation use, cycling, and walking provides insights into the university's overall carbon footprint and the potential for sustainable transportation alternatives.

Promoting Sustainable Transportation Solutions

To mitigate carbon emissions, educational institutes must actively promote sustainable transportation solutions among students, faculty, and staff. Encouraging the use of public transport, carpooling, cycling, and walking not only reduces individual carbon footprints but also fosters a culture of environmental responsibility. Providing convenient access to public transportation, bicycle racks, and pedestrian-friendly pathways further supports sustainable commuting practices.

Investing in Green Transportation

Embracing greener alternatives for campus transportation is essential in combating carbon emissions. Investing in electric or hybrid vehicles for official use and encouraging the adoption of electric vehicle charging infrastructure on campus demonstrates a commitment to reducing the university's carbon footprint and leading by example.

Raising Environmental Awareness

Educational institutes hold a unique position to raise environmental awareness among their campus communities. By educating students and staff about the environmental consequences of carbon emissions and the importance of sustainable transportation, institutes can inspire positive behavioral changes and promote a greener and more eco-conscious campus culture.

Components of Carbon footprint

Controlling your emissions as a company is essential to addressing the issue of climate change. You need to be aware of the numerous ways that you add to the difficulty in this regard. If not, your emissions reduction initiatives might not be all-encompassing.

The three categories that make the carbon emissions are as follows:

- **Scope 1 - Direct Emissions:** Emissions from sources that are directly owned or managed by the company, such as industrial processes, the burning of boiler fuel, or company vehicles, are referred to as direct emissions.
- **Scope 2 - Indirect Emissions:** Indirect Emissions: These include the steam, heat, and power the company purchases.
- **Scope 3 - Other Indirect Emissions:** These are emissions from sources that the organization does not directly own or administer but that are significant to its operations, like the production of raw materials, transportation, and waste disposal.

Depending on the reason, there are many forms of carbon footprint in addition to the varied emission scopes. They include:

- Product Carbon Footprint: This measures the carbon emissions of a good or service from the extraction of raw materials to the conclusion of its useful life.
- Corporate Carbon Footprint: Includes emissions produced by the operations, facilities, and operations of an organization.

- Operational Carbon Footprint: It is a byproduct of the routine business operations of your company, including the use of energy, transportation, and garbage.

Figure 2.4. Components of Carbon Footprint

Calculating Carbon Footprint

One of the most often used techniques for determining a company's greenhouse gas emissions is the greenhouse gas protocol. Using this technique, emissions are converted to CO_2 based on their ability to contribute to global warming. Following this, we can calculate actual and real emissions by measuring CO_2 emissions in metric tons. The term "Carbon Footprint" refers to the overall greenhouse gas emissions (GHG) that result from operations or other activities.

$$\text{GHG Emissions} = \text{Activity data [A]} \times \text{Emission Factor [EF]}$$

Where,

GHG = Emissions (e.g. amount of CO_2 or CH_4, etc.)

A = Activity data (e.g. liters of fuel burnt, kg of cement manufactured)

EF = Emission Factor (e.g. kg CO_2 /liter of fuel burnt, kgCO_2 /kg cement manufactured)

Chapter – 3

Auditing for Water Resource Management

Chapter - 3

3 AUDITING FOR WATER RESOURCE MANAGEMENT

3.1 Water demand of the university (for the financial year 2023-24)

In India, the design of water supply systems has been done using certain standards. Currently the standard being used is NBC, 2016. This specifies a consideration of use of the following:

- For communities with a population of between 20,000 to 100,000 @ 100 to 135 liters per head per day (Max. 135 lpcd has been considered).
- Persons working in normal working hours i.e. Staff @ 45 liters per head per day
- Visitors in the university @ 15 liters per head per day

Population in SRHU campus

The details of persons coming in SRHU campus are as per Table 3.1.

Table 3.1. Total population in the University during the year 2023-24

Sl. No	Particulars	Nos
1	Students on roll in SRHU campus	3,537
2	Staff (Teaching & Non-Teaching) in SRHU campus	3,150
4	Daily visitors in SRHU campus	2,825
Total population in SRHU campus		**9,512**

The details of the residents living in hostels of SRHU campus are as per below Table 3.2.

Table 3.2. Nos. of residents living in Hostels

Sl. No	Particulars	Nos
1	Nos. of residing Students in SRHU campus	1,542
2	No of residing Staff in SRHU campus	773
Total Residents Population in SRHU campus		**2,315**

Thus total maximum permissible water Consumption as per Standards laid as per NBC, 2016 is given in below Table 3.3.

Table 3.3. Total permissible water Consumption as per Standards laid as per NBC, 2016

Sl. No.	Particulars	Nos.	Maximum water consumption per Person per day (Liters)	Total Maximum water consumption Liters per Day
1	No. of Day time Population in SRHU campus	4,372	45	1,96,740
2	No. of Visitors in SRHU campus	2,825	15	42,375
3	Nos. of residing population in hostels of SRHU campus	2,315	135	3,12,525
4	Hospital (No of bed)	1200	450	5,40,000
5	OPD average	1200	15	18,000
6	Office	400	45	18,000
			Grand Total	**11,27,640**

Therefore, the actual water demand of the campus was approx. 11,27,640 liters per day or approx. 1,127 KLD.

3.2 Source of Water

The university relies on groundwater sourced from 3 bore wells and municipal supply to meet the total water requirements. Recognizing the importance of responsible water usage, the university has obtained necessary NOC from the Central Ground Water Board (CGWA) for groundwater extraction. The approved extraction limit stands at 1,150 m^3/day or 4,19,750 m^3/year through three tube wells, the copy for the same is enclosed as **Annexure 1**.

Two piezometers with telemetry are installed for monitoring ground water level as per CGWA guidelines.

Figure 3.1. Two Piezometers with telemetry within campus

3.3 Generation of waste water in the university

An attempt was made as per NBC, 2016 to understand the demand of water supply and waste water generated.

- Actual Water Demand of SRHU campus = **11,27,640** liters per day (1,127 KLD)

Waste Water Generation = 80% of total water consumption = 9,02,112 liters per day (902 KLD).

The source of water requirement is ground water (bore wells – 3 Nos.) and the wastewater generation is about 9,02,112 liters per day (902 KLD). The sewage wastewater from institutes is being treated with a common sewage treatment facility (STP 1 MLD) based on MBBR technique for water resource management. Treated water is being used for plantation in 1,60,800 sq. m. area and landscaping of land. The generated sludge of STP is utilized in green belt as manure.

Two separate ETP were also installed of capacity 90 KLD (40 KLD and 50 KLD) to treat the effluent generated from the campus.

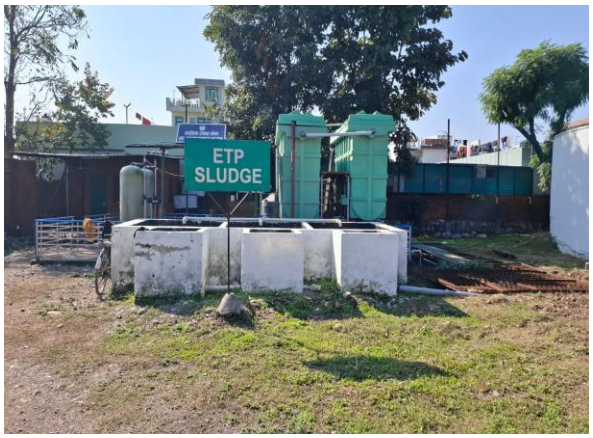

Figure 3.2. ETPs of capacity 90 KLD (40 KLD and 50 KLD) and STP of capacity 1 MLD

3.4 Rainwater Harvesting

Rainwater harvesting is a practice that involves collecting and storing rainwater for on-site reuse instead of allowing it to runoff. It is a vital strategy to conserve water resources and address water scarcity. By harvesting rainwater from rooftops and redirecting it to designated storage systems like wells or reservoirs with percolation, various beneficial uses can be achieved, ranging from irrigation and domestic purposes to groundwater recharge. Rainwater harvesting systems can cater to various water needs. The collected water can be used for gardens, livestock, irrigation, and domestic consumption after proper treatment. In some cases, rainwater can be purified to make it suitable for drinking, providing an alternative water source during regional water restrictions or supplementing the main supply during times of scarcity.

3.4.1 Benefits of Rainwater Harvesting

Drought Mitigation

Rainwater harvesting offers a dependable water supply during droughts when traditional water sources may be limited. It helps communities become more resilient in the face of water scarcity.

Flood Mitigation

By capturing rainwater, the likelihood of flooding in low-lying areas is reduced. Properly designed rainwater harvesting systems can divert excess water away from vulnerable regions.

Groundwater Recharge

Rainwater harvesting aids in recharging groundwater, which is crucial for maintaining stable water levels in wells and sustaining underground aquifers.

Independent Water Supply

In developed countries, rainwater harvesting systems supplement the main water supply, reducing dependence on conventional sources and supporting water conservation efforts.

Water Quality

Rainwater is naturally low in salinity and other contaminants, making it suitable for various non-potable uses without extensive treatment.

Urban Water Management

Implementing rainwater harvesting in urban areas reduces the burden on water distribution and sewer systems. This approach helps manage storm water runoff and protects freshwater bodies from pollution.

3.4.2 University's Initiatives in Rainwater Harvesting

The SRHU receive an annual rainfall of 2073.3 mm. (www.dehradun.nic.in).

The rainwater poured over different surface of the SRHU is as follows:-

Roof top – 71386 x 2.0733 x 0.85 = 1,25,803.9 cum

Road / paved area – 107711 x 2.0733 x 0.75 = 1,67,487.9 cum

Open area – 83425 x 2.0733 x 0.2 = 34,593 cum

Green belt – 160800 x 2.0733 x 0.15 = 50,007.9 cum

Total volume available annually for rain water harvesting is 3,77,892.7 cum

The university has demonstrated its commitment to sustainable water management by constructing 15 rainwater harvesting pits on campus. The pit efficiently collect rainwater from institutional blocks and hotel buildings, contributing to water conservation and reducing the demand on external water sources. The details of the rain water harvesting system and pits is provided in **Annexure 2**.

The rain water is collected in 150 KL capacity of underground water tank. That water is utilized for flushing in 119 toilets (approx. 9.45 Lac Liter annually) and 138 bathroom taps of Nursing College, Medical College for cleaning purposes. The excess rainwater is utilized for groundwater recharge (approx. 1.57 Cr. Liters annually) through infiltration wells located at different places.

Figure 3.3. Rainwater recharge pit and Underground water tank of 150 KL capacity

3.4.3 Improvements

Continued Efforts for Rain Water Harvesting

To maximize the benefits of rainwater harvesting, ongoing maintenance and monitoring of the existing systems are essential. Regular inspections and appropriate upkeep ensure that the collected water remains clean and suitable for various applications.

3.5 Other Water Conservation Practices

Waterless urinals

- 200 waterless urinals are installed in SRHU to save precious ground water
- One waterless urinal saves 1,51,000 liter of water annually
- SRHU saves 3.02 Cr. liter water annually.

Figure 3.4. Waterless urinals (200 Nos.)

Sand Bottle in Cisterns

- 1-liter sand bottles placed in cisterns
- 10-liter water saving assuming 10 flushes per day
- 45.11 Lakh Liter water saved annually @ 1236 toilets x 10-time flush in a day

Condensed water of AC units

- 1.20 Lakh liter water saved annually from AC condensed water, further more exploration will be continued

RO reject water being used in toilet and laundry

- 32.85 Lakh liter water saved annually

Scrub Station inside OTs are being used with sensor taps

- Approx. 5 Lac liter water saved annually

Social Behavioral Change Communication

- Awareness campaign & Pamphlets distribution
- Leakage proof campaign
- Celebration of Water day & Swachhta Pakhwada

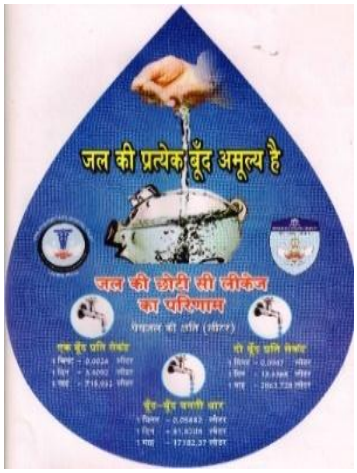

Figure 3.5. Awareness campaign and pamphlets distribution

3.6 Observations and Findings

Management of Water Resources

In line with environmental regulations and conservation efforts, the university responsibly acquired permission from the CGWA (NOC no. CGWA/NOC/INF/REN/1/2022/7167) dated 23.01.2022 which is valid up to 22.01.2027. This NOC will stipulate the maximum permissible limit for groundwater extraction, aimed at preserving the groundwater resources and maintaining ecological balance. By adhering to the approved extraction volume, the university actively contributes to conserving the groundwater reserves and mitigating potential environmental impacts. The domestic wastewater is being treated with a sewage treatment facility (STP) based on MBBR technique. Treated water is being used for plantation and landscaping.

Rain Water Harvesting

The SRHU is operating 15 rain water harvesting systems with total capacity of 150 KL per annum which is being utilized as 1.57 Cr. liters for ground water recharge and 9.45 Lac. liters for flushing. Efforts of SRHU for water conservation by adopting rain water harvesting systems/ recharge bore wells are appreciable though to fill the gap of water demand (431 KLD x 350 working days = 1,50,850 KL/year) and recharge capacity of 15,700 KL/year, Rain water harvesting needs to be increased in coming subsequent years in a phased manner to recharge the ground water to achieve the target of at least 70% of total water demand.

Chapter – 4

Auditing for Waste Management

Chapter - 4

4 Auditing for Waste Management

Embracing sustainable waste management practices is crucial for educational institutes to minimize their environmental impact and contribute to a cleaner, healthier future. By adopting responsible waste handling and disposal methods, such as recycling, composting, and proper disposal of hazardous waste, institutes can significantly reduce their waste footprint.

Human activities inevitably produce waste, and how these wastes are handled, stored, collected, and disposed of can have significant implications for the environment and public health. Improper waste management results in pollution, unsightly litter, and potential health hazards in our communities. To address these challenges, it is essential to classify waste into distinct categories: bio-degradable, non-biodegradable, and hazardous waste. Each type requires specific handling and disposal methods to minimize its impact on the environment.

4.1 Generation of Solid Waste in the university

Table 4.1. Generation of Solid Waste

Sl. No.	Particulars	Nos.	Rate of solid waste generation (kg per person per day)	Total solid waste generation (kg/day)
1	No. of Day time Population in SRHU campus	4,372	0.1	437.2
2	No. of Visitors in SRHU campus	2,825	0.1	282.5
3	No. of residing population in hostels of SRHU campus	2,315	0.2	463
			Total	**1,182.7**

4.2 Management of waste

4.2.1 Bio-degradable Waste Management

Bio-degradable wastes include organic matter such as food waste, canteen waste, and toilet waste. The university actively manages canteen waste (common canteen), generating approximately 1100-1200 kg per day. Rather than letting this waste go to waste, the university

has partnered with **Municipal Council, Doiwala** which receive the canteen waste for next five years. This initiative not only minimizes waste but also supports local agriculture, creating a win-win situation for the university and the community.

Composting Pit

The organic waste collected from hospital / hostels kitchen. On an average 10 kg of leftover food is collected and sent to compost pit located inside campus for composting. The manure is utilized in garden.

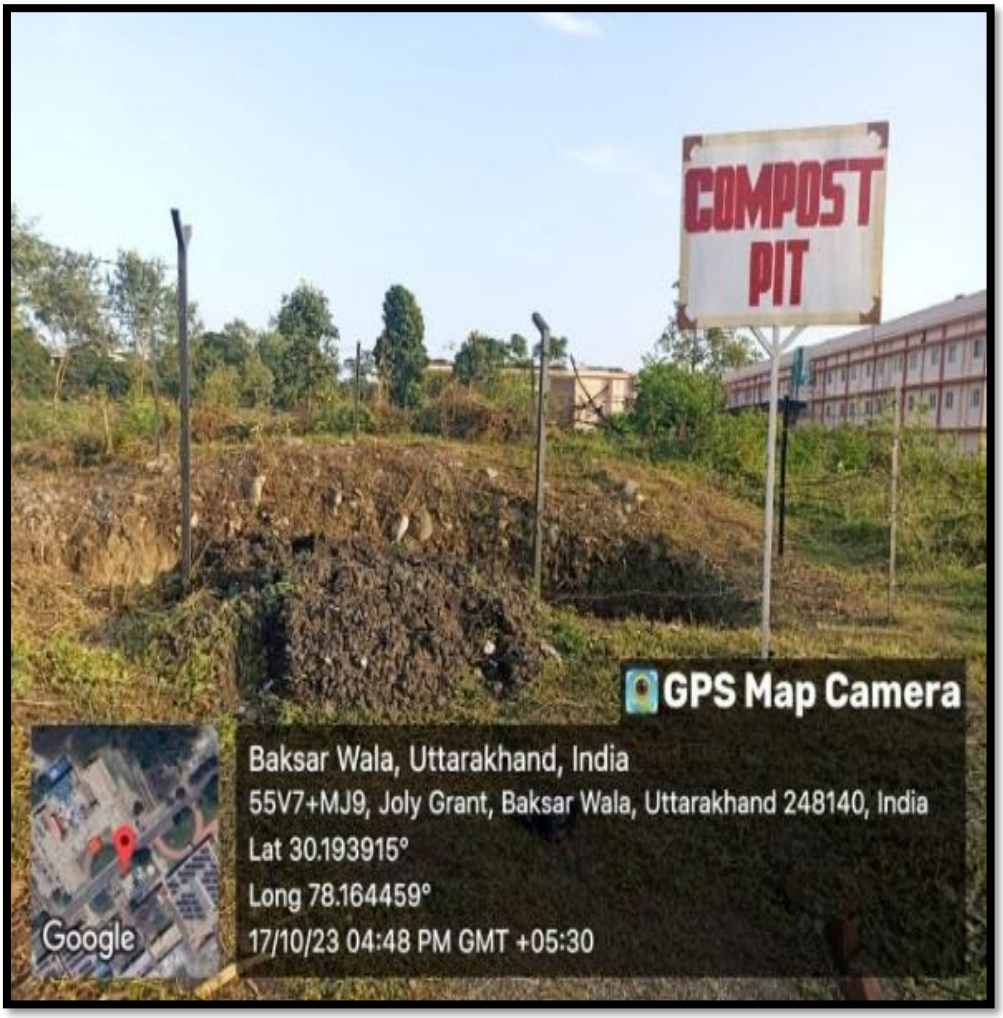

Figure 4.1. Composting pit within the campus

Biogas Plant

SRHU has installed a biogas plant of capacity 4 cum/day for the management of biodegradable wastes by converting bio wastes in to biofuels. The university has initiated a good effort as per the line of "wealth from wastes". It was estimated that approx. 685.44 Kg LPG (equivalent to 36

LPG) used for cooking purpose in guest house was saved annually by the generation of bio gas from the plant.

Figure 4.2. Bio-gas Plant of capacity 4 cum/day

4.2.2 Non-Biodegradable Waste Management

Non-biodegradable wastes, including plastics, tins, and glass bottles, are commonly disposed of in homes and institutes. The university has taken significant strides in waste management by diligently collecting garbage, including non-biodegradable items such as metals, bottles, plastics, cans, tins, and broken glassware. This daily collection ranges from 550-600 kg (about 50% total solid waste) and the university responsibly hands over or resells the waste to authorized vendors, ensuring proper accounting and timely disposal.

4.2.3 Hazardous Waste Management

Hazardous waste poses a significant threat to both human health and the environment arising from cleaning chemicals, acids, and petrol. The operation of DG sets and electrical appliances generates other hazardous wastes. By obtaining consent from the Uttarakhand Pollution

Control Board, the university demonstrates its dedication to addressing hazardous waste management responsibly.

Obtaining consent from the regulatory authority reflects the university's compliance with the **Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016** and a commitment to environmental accountability. Adhering to these rules not only ensures legal compliance but also safeguards the environment and promotes public health.

The university has opted agreement (copy enclosed as **Annexure 3**) with the authorized vendor **M/s Bharat Oil and Waste Management Ltd. (BOWML)** for disposal of bio-hazardous waste generated from any of its institute.

The university's collaboration with authorized vendors for waste disposal reflects a well-organized and responsible approach. Handing over or reselling the waste ensures that it is managed appropriately, mitigating potential harm to the environment and facilitating recycling or proper disposal.

By engaging with authorized vendors for waste resale, the university actively participates in a circular economy model. This approach ensures that waste is treated as a valuable resource, promoting recycling and reducing waste sent to landfills.

4.2.4 E-Waste Management

SRHU is committed to promoting sustainable practices, especially in e-waste management. To minimize the accumulation of electronic waste (e-waste), the university has implemented a forward-thinking "By Back Purchase Policy." Under this policy, new electronic instruments, equipment, computers, and peripherals are procured exclusively through the buy-back scheme. This approach ensures that outdated or broken electronic items are responsibly disposed of and that the generation of e-waste is significantly reduced.

The university is a member of **'Anmol Paryavaran Sanrakshan Samiti'** certified by UEPPCB which provides facility of e-waste collection, storage, dismantling, recycling refurbishing and disposal. A copy for the same is enclosed as **Annexure 4**.

4.2.5 Bio-Medical Waste Management

Biomedical waste management is a critical component of healthcare practices at Swami Rama Himalayan University, ensuring the safety of patients, healthcare workers, and the environment. The university adheres to strict guidelines for the segregation, collection,

treatment, and disposal of biomedical waste in compliance with the **Biomedical Waste Management Rules, 2016**, established by the Government of India. Proper segregation of waste at the source into color-coded bins helps minimize the risk of contamination and promotes effective recycling and disposal. Advanced technologies, including autoclaving, incineration, and chemical disinfection, are employed to treat hazardous waste responsibly. The university also emphasizes awareness and training programs for its staff and students to foster a culture of sustainability and environmental stewardship in healthcare. By integrating efficient waste management practices, the university reinforces its commitment to public health and ecological balance.

SRHU has opted agreement (copy enclosed as **Annexure 5**) with the authorized organization **Medical Pollution Control Committee (MPCC)** for disposal of bio-medical waste generated from any of its institutes.

4.2.6 Plastic Waste Management

Plastic waste management is a critical concern for institutions like SRHU, which is dedicated to fostering environmental sustainability alongside academic excellence. Effective management involves a multi-faceted approach, including reducing plastic usage on campus, promoting the use of eco-friendly alternatives, and implementing robust recycling programs. Awareness campaigns can educate students and staff about the environmental hazards of plastic waste, encouraging responsible disposal practices. Additionally, partnerships with local waste management organizations can ensure efficient collection and recycling of plastic materials. By integrating these initiatives, the university can set an example in creating a sustainable and environmentally conscious campus.

The university has stablished a plastic bank for collection of single use plastic in August 2022 with association of CSIR – IIP and Social Development for Communities Foundation. The single layer plastic is collected and being sent to the CSIR - Indian Institute of Petroleum, Dehradun for converting it into diesel.

Figure 4.3. Establishment of Plastic Bank for collection and proper disposal of plastic waste

The SRHU has opted MOU (copy enclosed as **Annexure 6**) with the authorized organization **Social Development for Communities (SDC) Foundation** for disposal of plastic waste

generated from any of its institutes. For the academic year of 2023-24 approx. 1800 kg of plastic waste was handover SDC for proper disposal, copy for the same is enclosed as **Annexure 7**.

Environmental Impact and Climate Change

Improper waste management practices, such as dumping waste in pits or burning them, can have severe consequences. Contaminants discharged into soil and water supplies can pollute ecosystems and harm wildlife. Additionally, burning waste contributes to greenhouse gas emissions, exacerbating global climate change. Sustainable waste management practices are essential to mitigate these negative impacts and promote environmental stewardship.

Chapter – 5

Auditing for Environmental Management

Chapter - 5

5 Auditing of Environmental Management

As part of a comprehensive green audit of SRHU campus, the crucial aspects assessed were the illumination and ventilation in the classrooms. The audit aimed to determine the adequacy of natural light and fresh air circulation within the campus to ensure a conducive and eco-friendly learning environment.

5.1 Indoor Environment

Indoor environment monitoring initiative offers numerous benefits to our campus community. By prioritizing visual and thermal comfort, we enhance productivity and reduce discomfort. Proper ventilation ensures a continuous supply of fresh air, promoting health and well-being. Monitoring noise levels helps create a peaceful and focused atmosphere that fosters concentration and overall happiness.

At SRHU, ensuring a conducive and comfortable indoor environment for students and staff is of paramount importance. To achieve this, we have undertaken a comprehensive indoor environment monitoring initiative. Our monitoring covers four key aspects: visual comfort, thermal comfort, ventilation, and noise levels in each university block.

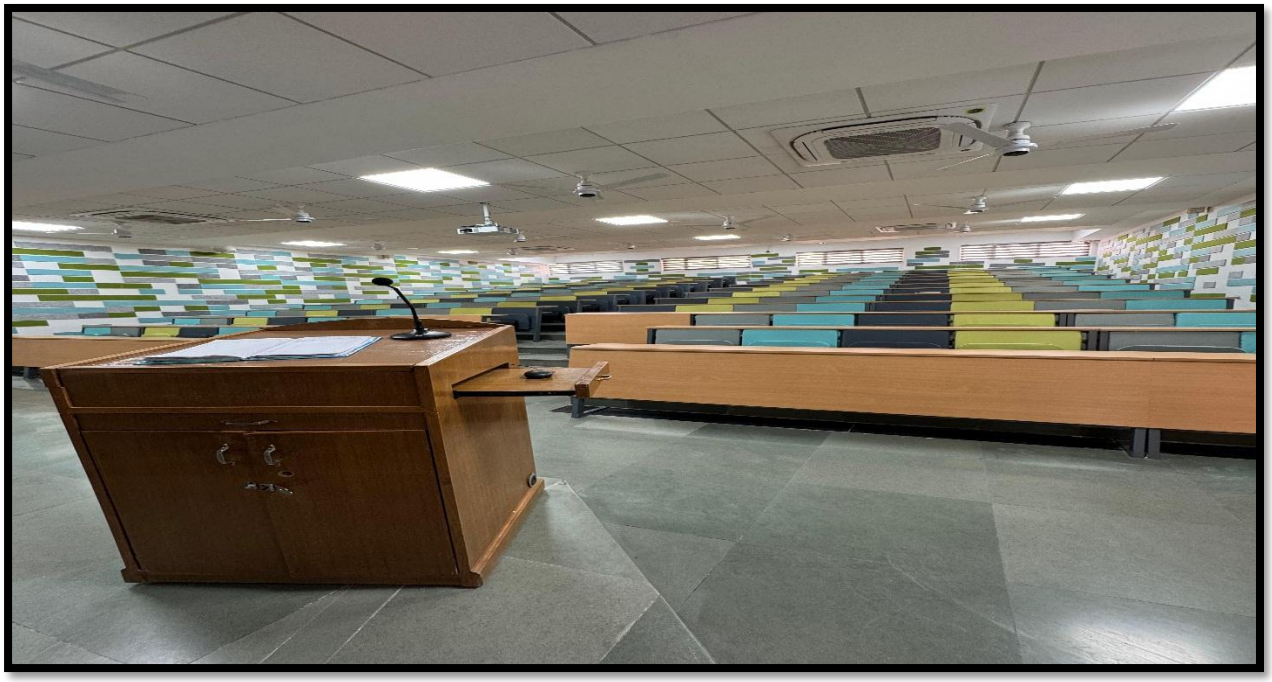

Figure 5.1. Natural ventilation and lighting system in the university

5.1.1 Visual Comfort Assessment

We prioritize visual comfort to create an atmosphere that promotes productivity and well-being. The indoor environment is meticulously analyzed for appropriate lighting levels, minimizing glare, and optimizing natural light whenever possible. By assessing visual comfort, we aim to provide an environment that supports optimal learning and working conditions.

Indoor levels of illumination (Lux) were monitored using Lux meter (Mextech, LX-1010B) at various places as class rooms, library and laboratory. The illumination (Lux) were found to be satisfactory as per limits prescribed in IS: 3643 (Part-II).

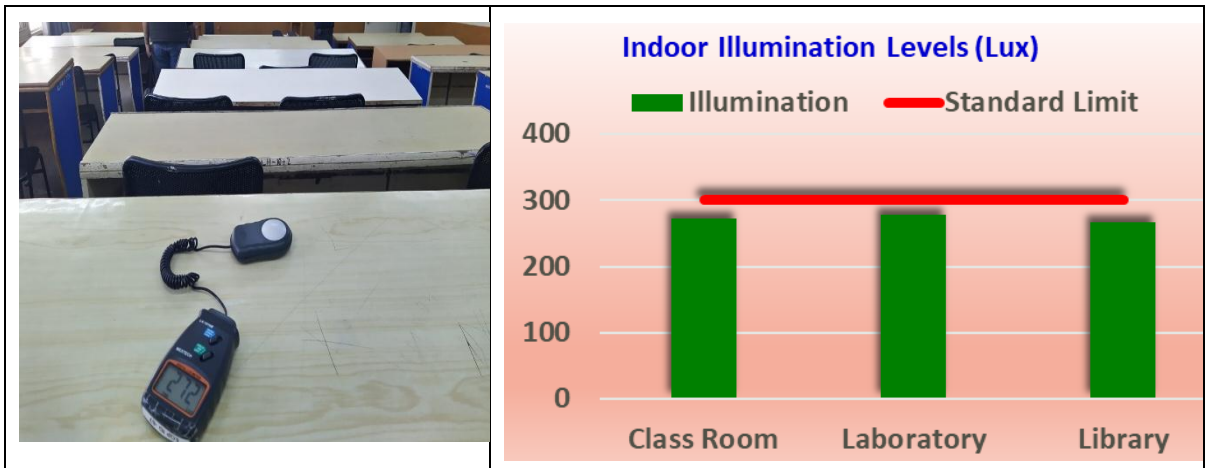

Figure 5.2. Indoor Levels of Heat stress (Temperature and Humidity) in the university

5.1.2 Thermal Comfort Evaluation

Comfortable thermal conditions are crucial for the overall well-being of individuals within our campus. We conduct thorough evaluations of indoor temperatures to ensure they fall within acceptable comfort ranges. By maintaining ideal thermal conditions, we enhance the learning experience and foster a positive and comfortable atmosphere.

Indoor levels of heat stress (temperature and Humidity) were monitored using heat stress monitor (Countron, Temp. & Humidity logger) at various places as class rooms, library and laboratory. The temperature and Humidity levels were found to be satisfactory as per limits prescribed by ASHRAE.

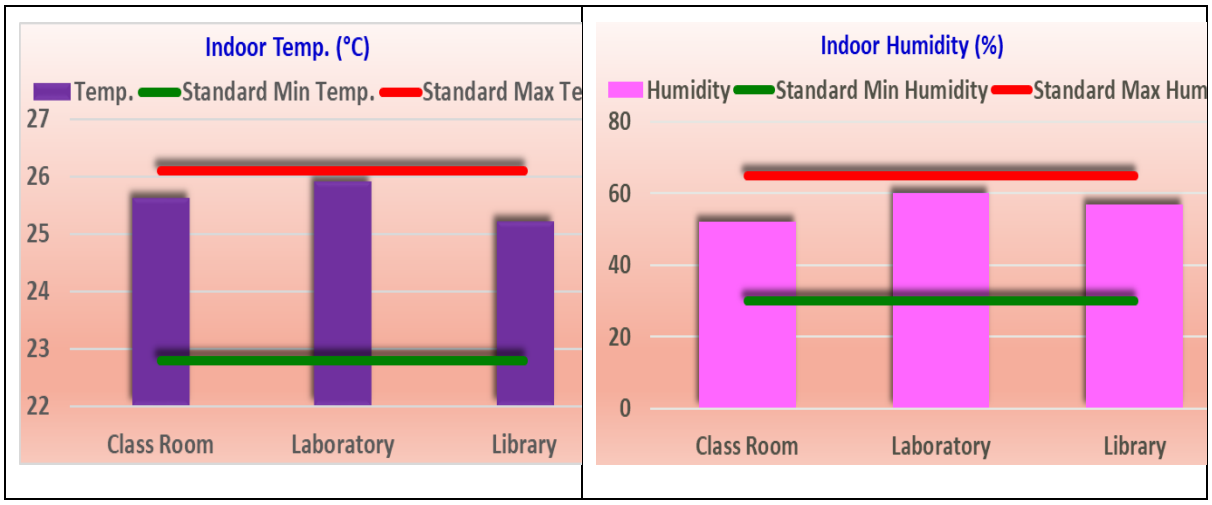

Figure 5.3. Indoor Levels of Heat stress (Temperature and Humidity) in the university

5.1.3 Ventilation Rate Assessment

Proper ventilation is essential to maintain a healthy and refreshing indoor environment. Our monitoring efforts include assessing indoor air quality, ensuring adequate airflow, and promoting effective ventilation systems. By optimizing ventilation, we create a space that encourages productivity and sustains the health and comfort of our campus community.

5.1.4 Noise Level Assessment

Noise pollution can adversely impact concentration and well-being. To combat this, we carefully monitor noise levels in each university block. By identifying and mitigating sources of excessive noise, we aim to establish a tranquil and peaceful environment conducive to learning, research, and personal growth.

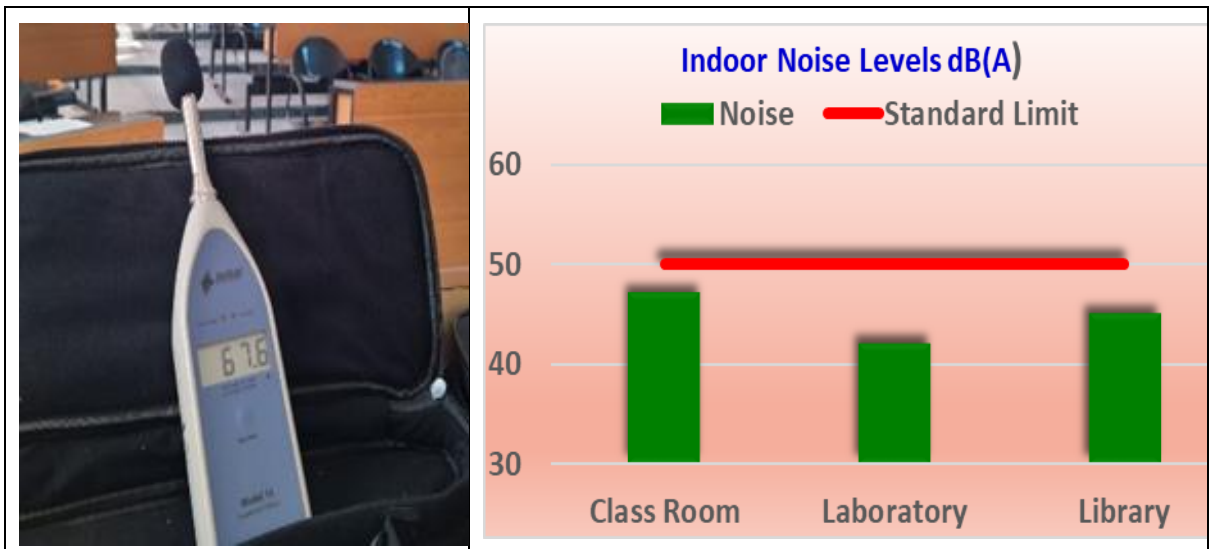

Figure 5.4. Indoor Noise levels in the university

Indoor Air Quality Assessment

Indoor air quality assessment was done using online and real time analyzer (Airveda PM2510CVTH), Sr. No. 1211220051). Indoor air quality in respect to PM_{10}, $PM_{2.5}$, NO_2, SO_2, CO, Ozone Ammonia found to be satisfactory and comfortable for educational and learning purpose.

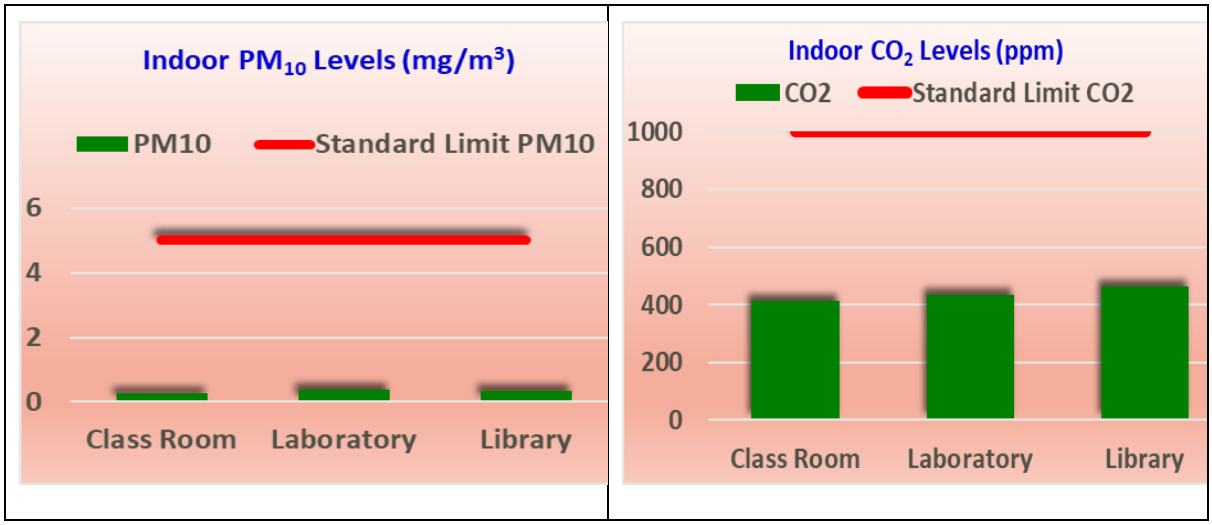

Figure 5.5. Indoor Air Quality in the university

Overall indoor environment in respect to visual comfort, thermal comfort, noise levels, ventilation and air quality was found to be satisfactory in each block of the university.

5.2 Outdoor Environment

Air Quality Index (AQI) transforms complex air quality data of criteria pollutants into a single number (index value), with nomenclature and colour. AQI has six categories of air quality which are defined as Good, Satisfactory, Moderately Polluted, Poor, Very Poor and Severe. AQI is considered as 'One Number- One Colour-One Description' for the common man to judge the air quality within his vicinity. The measurement of AQI is based on pollutants, namely PM_{10}, $PM_{2.5}$, NO_2, SO_2, CO, Ozone Ammonia.

For manual monitoring stations, data were fed manually in AQI calculator developed by CPCB to get AQI value as:

Table 5.1. Air Quality Index (AQI) Calculator

Date	DD-MM-YYYY	INPUT	Station	NSIT	
Pollutants	**Duration**	**Conc. in µg/m3 (CO in mg/m3)**	**Sub-Index**	**Check**	**AQI**
PM_{10}	24-hr avg	75	75	1	**85**
$PM_{2.5}$	24-hr avg	51	85	1	
SO_2	24-hr avg	12	15	1	
NO_2	24-hr avg	20	25	1	
CO	max 8-hr	0.16	8	1	
O_3	max 8-hr	20	20	1	
NH_3	24-hr avg	27	7	1	
Concentrations of minimum three pollutants are required; one of them should be PM10 or $PM_{2.5}$. The check displays "1" when a non-zero value is entered					

Interpretation of Air Quality Index (AQI)

Air Quality Index

Table 5.2. Indicators & Categories of Air Quality Index

Good (0–50)
Satisfactory (51–100)
Moderately polluted (101–200)
Poor (201–300)
Very Poor (301–400)
Severe (401-500)

AQI Result

Table 5.3. Test Results of Air Quality Index

Air Quality Index	Air Quality Status
85	Satisfactory (51–100)

The Air Quality Index (AQI) is observed as 85 that indicates the ambient air quality is Satisfactory at university and safe for human health.

5.3 Green Practices for Environmental Management

Figure 5.6. Awareness programme for Swatchh Bharat

5.4 Observations and Findings

- Management of indoor air quality in respect to visual comfort, thermal comfort, noise levels, heat stress and ventilation/ air exchange rate found to be satisfactory as per regulatory requirements.
- Outdoor air quality of the university in respect to particulate aerosols (PM_{10}, $PM_{2.5}$), gaseous pollutants and air quality index (AQI) found to be satisfactory as per regulatory guidelines and human health requirements.
- Dependency of electrical power needs to be reduced by adopting renewable energy resources as solar and wind energy to achieve the target of 70% of the total energy demand and to reduce carbon credit of the university at a large extent.
- Increase green belt areas alongside the boundaries and road networks of the university and in the local areas as village communities, panchayat lands and forestry areas at a large extent to reduce carbon credit of the university and to achieve the responsibility of green management.

Chapter – 6

Auditing for Health and Safety

Chapter - 6

6 Auditing for Health and Safety

6.1 Fire Safety

The campus of SRHU complied with fire prevention and fire safety equipment of National Building Codes and obtained a fire safety certificates for the Main Hospital, Lab Building, Activity Center, Cancer Research Institute (CRI), Utility Building and Engineering College from Uttarakhand Fire and Emergency Services, Dehradun. A copy for the same is enclosed as **Annexure 8.**

Figure 6.1. Firefighting facilities

Fire safety appliances are in place in almost departments/Sections. The commitment to fire safety extends beyond individual departments to creating a secure and protected environment across the entire campus. To achieve this vision, an active approach is needed to install fire safety appliances, including fire extinguishers, smoke detectors, fire alarms, and emergency exits, in each department and section on every floor.

6.2 Health Safety

Swami Rama Himalayan University (SRHU) in Dehradun, Uttarakhand, India offers health care services and has a hospital that treats a range of conditions. The university also has a health benefit policy for its employees. The health and safety of SRHU community is of paramount importance. SRHU have implemented robust health safety measures to provide a secure and nourishing environment for all.

Emergency department

The hospital's emergency department treats allergic reactions, including anaphylaxis, a life-threatening condition.

Figure 6.2. Emergency department

Medical board

The university's medical board conducts pre-employment medical checkups for new employees

Health benefit policy

The university's health benefit policy provides medical coverage for employees and their dependents

Occupational hazards

The university covers medical expenses for employees who are injured or sick due to occupational hazards

Health benefit policy for employees

Employees must submit a photograph of their family and dependents to the HR department

The HR department issues a hospital card to employees who are eligible for health benefits

Beneficiaries must present their hospital card to access health benefits

Other health safety measures

The university has a department of medical physics that uses state-of-the-art imaging and radiation therapy modalities

The university has hosted workshops on health care quality and patient safety

Safe and Potable Drinking Water

To ensure the highest water quality, SRHU has installed state-of-the-art RO systems, guaranteeing the purification of water for potable use. Regular testing of drinking water samples is conducted to confirm its portability and adherence to the highest water quality standards. SRHU commitment to safe drinking water ensures that everyone can hydrate without any health concerns.

Health Community Center/Dispensary

As one of the top universities in Uttarakhand with NAAC A+ accreditation, SRHU stands out with its unique integration of healthcare and education. It houses a multispecialty Himalayan Hospital, Cancer Research Institute (CRI), Ayurveda Centre, and a Rural Development Institute (RDI) under one roof, complemented by seven diverse schools and colleges which are Himalayan Institute of Medical Sciences (HIMS), Himalayan College of Nursing (HCN), Himalayan School of Management Studies (HSMS), Himalayan School of Science & Technology (HSST), Himalayan School of Bio Sciences (HSBS), Himalayan School of Yoga Science (HSYS), Himalayan School of Pharmaceutical Sciences (HSPS).

Figure 6.3. Himalayan Institute of Medical Sciences in campus

Proactive Health and Safety Initiatives

Beyond providing essential facilities, SRHU is dedicated to fostering a culture of proactive health and safety. Regular health awareness programs, workshops, and educational sessions are organized to equip our community with knowledge on preventive health measures and healthy lifestyle choices.

6.2.1 Traffic & Parking Area

Figure 6.4. Management of Traffic & Parking facility of SRHU

SRHU recognizes the significance of efficient traffic management to ensure the safety and well-being of students, staff, and visitors. With a designated parking area in place, SRHU has taken proactive measures to manage the daily traffic fleet on campus, prioritizing the safety and convenience of everyone.

Adequate Parking Facilities

SRHU campus boasts a well-planned and designated parking area that can efficiently accommodate the daily traffic fleet. By providing ample parking spaces aimed to minimize congestion and facilitate smooth vehicular movement within the campus premises. This approach ensures a hassle-free experience for all individuals arriving at SRHU campus.

Promoting Road Safety

Road safety is of paramount importance and implementing good traffic management practices, SRHU minimizes the risk of accidents and ensure the safety of campus community. Clear signage, speed limits, and designated pedestrian crossings are some of the measures in place to promote road safety within the campus.

Pedestrian Safety

SRHU recognizes the significance of pedestrian safety alongside vehicular safety. To prioritize the well-being of our pedestrians, SRHU has implemented dedicated walkways and pathways that keep them safely separated from vehicular traffic. This proactive approach fosters a campus environment where pedestrians can navigate comfortably without any concerns.

Encouraging Sustainable Transportation

In addition to managing traffic efficiently, SRHU is committed to promoting sustainable transportation options. Initiatives such as carpooling, cycling, and promoting the use of public transport are encouraged to reduce traffic congestion and contribute to environmental conservation.

6.3 Observation and Findings

- The university is providing good health and safety measures by its hospital facility, hygiene and clean management, RO water supply, organizing medical health checkups camps at community levels as CSR activities.

- Water quality and food quality need to be ensured and get tested on periodic basis from NABL and FSSAI approved laboratories to maintain the hygienic and health safety conditions.
- Fire safety measures adopted by the university are adequate though the verification of safety system need to be approved by state fire safety division.
- Onsite and offsite Emergency and Disaster management plan (DMP) need to developed and implemented to overcome the unforeseen accidents and hazards in the university.

Chapter – 7

Auditing for Green Campus Management

Chapter – 7

7 Auditing for Green Campus Management

Unfortunately, the biodiversity is facing serious threats from habitat loss, pollution, over consumption and invasive species. Species are disappearing at an alarming rate and each loss affects nature's delicate balance and our quality of life. Without this variability in the living world, ecological systems and functions would break down, with detrimental consequences for all forms of life, including human beings. Newly planted and existing trees decrease the amount of carbon dioxide in the atmosphere.

Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere, and release it as oxygen. The amount of oxygen that a single tree produces is enough to provide one day's supply of oxygen for people. So while you are busy studying and working on earning those good grades, all the trees on campus are also working hard to make the air cleaner for us. Trees on our campus impact our mental health as well; studies have shown that trees greatly reduce stress, which a huge deal is considering many students are under some amount of stress.

7.1 Tree plantation drives by SRHU

SRHU have a total of 1,60,800 sq. m. of green area with approx. 4768 number of trees within the campus. The plantation drive of 3300 trees saplings in association with State Forest Dept., Govt. of Uttarakhand was done in September 2022. SRHU has its own horticulture nursery which maintain green area with 40 staff.

Biodiversity

SRHU is significantly rich in faunal diversity. Significant number of bird nests can be seen at many places. Approx. 15 species of Birds, 1 Reptiles, 2 Amphibians, 22 Butterfly and 125 Floral species were found within the campus.

Figure 7.1. Green Area of the campus

House Keeping

Being the part of Swatchha Bharat Abhiyan, the Saraswati Group of Colleges ensures neat and clean environment. Consequently, buildings are kept clean and sanitized on regular basis on all working days.

7.2 Other Green Efforts adopted by the University

7.2.1 Solar Power System

The university has adopted the Solar Power Plant of capacity 1.5 MW as an alternate source of electricity/power/energy installed at roof tops of building areas. The total power generation through solar power plant was 21,04,000 kwh during the period 2023-24 which saves approx. Rs. 78,90,000/-. The SRHU exported approx. 1,14,796 kwh electricity to the grid during the period 2023-24.

Figure 7.2. Solar Power System installed at SRHU (1.5 MW)

SRHU has also installed solar power heating system of capacity 50,000 LPD which is equivalent to 7,50,000 kwh of electricity saving annually on heating of water. The hot water is supplied to Hospital & Cancer Research Institutes (CRI) wards for patient care, cleaning purpose and Hostels round the clock.

7.2.2 Electric Vehicles (EVs) as Green Transport

Electrical vehicles are being used inside SRHU campus as a shuttle vehicle to transport patients, doctors, student, staff and visitors. The university has 5 number of electric vehicles during the

period 2023-24 within the campus for transportation. Annually 27,375 Km is being covered through these EVs. Annually savings of Rs. 1,64,250/- in comparison to petrol vehicle.

Figure 7.3. Green Transport (Electric Vehicles) within the campus

7.2.3 Biogas Plant

SRHU has installed a biogas plant of capacity 4 cum/day for the management of biodegradable wastes by converting bio wastes in to biofuels. The university has initiated a good effort as per the line of "wealth from wastes". It was estimated that approx. 685.44 Kg LPG (equivalent to 36 LPG) used for cooking purpose in guest house was saved annually by the generation of bio gas from the plant.

Figure 7.4. Bio-gas Plant of capacity 4 cum/day

7.3 Observations and Findings

- Green belt with tree cover as trees – approx. 4768 Nos. is managed by the campus.
- Tagging on all trees with numbering/ counting record to be managed for an effective green campus program or drives.
- Encouraging students and conducting competitions among departments for making the campus green.
- Increase green belt areas alongside the boundaries and road networks of the university and in the local areas as village communities, panchayat lands and forestry areas at a large extent to reduce carbon credit of the university and to achieve the responsibility of green management.
- Dependency of electrical power needs to be reduced by adopting renewable energy resources as solar and wind energy to achieve the target of 70% of the total energy demand and to reduce carbon credit of the university at a large extent.
- . Biogas pant at a large scale to be adopted to manage the biodegradable wastes and to produce clean energy source for cooking and lighting purpose.

Chapter – 8

Auditing for Carbon Footprint

Chapter – 8

8 Carbon Footprint s of SRHU campus

The scope of this chapter is to present the Swami Rama Himalayan University's carbon emissions for the academic year 2023-24. It explores the campus response to climate change and the formation of the Climate action plan. Introduces the plans for the new climate action team to take this agenda forward, building on past success.

8.1 Global Warming Potentials

The following table includes the 100-year time horizon global warming potentials (GWP) relative to CO_2. This table is adapted from the IPCC Fifth Assessment Report, 2014 (AR5).

Table 8.1. Global warming potentials (GWP) relative to Carbon dioxide (CO_2)

Industrial designation or common name	Chemical formula	GWP values for 100- year time horizon as per fifth assessment report (AR5), 2014
Carbon dioxide	CO_2	1
Methane	CH_4	28
Nitrous oxide	N_2O	265
Sulfur hexafluoride	SF_6	23,500
Nitrogen trifluoride	NF_3	16,100
HFC-23	CHF_3	12400
HFC-32	$CH2F_2$	677
HFC-41	CH_3F	116
HFC-125	C_2HF_5	3170
HFC-134	CHF_2CHF_2	1120
HFC-134a	$C_2H_2F_4$	1300
HFC-143	CH_2FCHF_2	328
HFC-143a	$C_2H_3F_3$	4800
HFC-152	CH_2FCH_2F	16
HFC-152a	$C_2H_4F_2$	138
HFC-161	CH_3CH_2F	4
HFC-227ea	C_3HF_7	3350

HFC-236cb	$CH_2FCF_2CF_3$	1210
HFC-236ea	CHF_2CHFCF_3	1330
HFC-236fa	$C_3H_2F_6$	8060
HFC-245ca	$CH_2FCF_2CHF_2$	716
HFC-245fa	$CHF_2CH_2CF_3$	858
HFC-365mfc	$CH_3CF_2CH_2CF_3$	804
HFC-43-10mee	$CF_3CHFCHFCF_2CF_3$	1650
PFC-14	CF_4	6630
PFC-116	C_2F_6	11,100
PFC-218	C_3F_8	8900
PFC-318	c-C_4F_8	9540
PFC-31-10	C_4F_{10}	9200
PFC-41-12	C_5F_{12}	8550
PFC-51-14	C_6F_{14}	7910
PFC-91-18	$C_{10}F_{18}$	7190
HCFC-22 CHCLF2	HCFC-22 $CHCLF_2$	1760

8.2 Scope 1 Emissions

Scope 1 includes direct emissions from sources owned or controlled by the university. The primary activities contributing to Scope 1 emissions are:

- **Fuel Combustion in Company Vehicles:**
- **Diesel (HSD):** 104,378 liters used, resulting in 271.38 tCO_2e.
- **Petrol (ULP):** 9,713 liters used, resulting in 20.40 tCO_2e.

Fuel combustion in university-owned vehicles represents a significant source of emissions, with diesel accounting for the majority due to its high usage and emission factor. Petrol, though used in smaller quantities, also contributes to the overall footprint.

- **Stationary Emissions:**
- **Diesel Generators:** 160,866 liters used, emitting 434.34 tCO_2e.

Diesel generators are a critical backup power source for the university, especially during grid outages. However, their high fuel consumption makes them a substantial contributor to Scope

1 emissions. Efforts to optimize generator usage or transition to cleaner alternatives could significantly reduce these emissions.

From Scope-1 (Direct Emissions from Company owned sources)

Category	Unit	Value	Source of activity	Emission factor	Source of E.F.	KG CO2
Fuel combustion in company vehicles (Transportation)						
Company owned vehicles	liters	104378	Fuel type - HSD	2.6 $kgCO_2e$/liter	India GHG program Version 1.0 2015	271382.8
Company owned vehicles	liters	9713	Fuel type - ULP	2.1 $kgCO_2e$/liter	India GHG program Version 1.0 2015	20397.3
Stationary emissions	liters	160866	Diesel generators	2.7 $kgCO_2$/liter		434338.2
Fugitive emissions (Refrigerants)						
R-22 gas	kg	60	Refrigerants/Air conditioning	1810	GWP values- GHG protocol	108600
R-410 gas	kg	2	Air conditioning and heat pumps	1725	ASHRAE Standard 34	3450
R-134 gas (HFC134a)	kg	2	Refrigerants/Air conditioning	1300	GWP values- GHG protocol	2600
R-32 gas	kg	25	Refrigerants/Air conditioning	675	arctick.org	16875
Total ($kgCO_2e$)						**857643.3**

8.3 Scope 2 Emissions

Scope 2 emissions are derived from the university's consumption of purchased electricity. The total electricity usage contributes 10.16 tCO2e. These emissions are significant, given the dependency on the regional power grid.

Key Source:

- Electricity sourced from the state utility.

The reliance on conventional electricity from the grid underscores the need for renewable energy solutions. Solar panel installations and energy efficiency measures, such as LED lighting and advanced HVAC systems, could reduce Scope 2 emissions considerably.

From Scope 2 Emissions (Indirect Emissions from Power/ Heat/ Steam)

Category	Unit	Value	Source of activity	Emission factor	Source of E.F.	Kg CO_2
Electricity consumption						
Electricity consumption	MWh	14.21	Electricity from Grid	0.715 tCO_2/MWh	CO_2 Baseline Database for the Indian Power Sector	10160.15
Total ($kgCO_2e$)						**10160.15**

8.4 Scope 3 Emissions

Scope 3 emissions account for the largest share of the university's carbon footprint, underscoring the impact of indirect activities. The primary contributors include:

- **Employee and Student Commute:** Commuting-related emissions dominate Scope 3. The university's large student and staff population relies on various modes of transport, including personal vehicles, buses, and public transportation. Carpooling initiatives, enhanced public transit access, and cycling infrastructure could mitigate these emissions.
- **Waste Management:** Decomposition of organic waste generates methane, a potent greenhouse gas. The university's waste management practices significantly influence these emissions. Implementing composting systems, waste segregation, and recycling programs can reduce methane production and promote circular economy principles.
- **Procurement Activities:** Emissions associated with the production, packaging, and transportation of goods and services procured by the university represent a significant portion of Scope 3. Partnering with eco-conscious suppliers, prioritizing locally sourced materials, and adopting sustainable procurement policies can minimize this impact.
- **Other Activities:** Additional sources include business travel, outsourced activities, and investments. While smaller in comparison, these sources cumulatively contribute to the overall footprint and present opportunities for targeted interventions.

From Scope 3 Emissions (Other Indirect Emission from Transportation/ Travelling)

Category	Unit	Value	Source of activity	Emission factor	Source of E.F.	Kg CO_2
Air travel / Business travel						
Air travel within India	km	113414.9	Business travel - flight	0.121 kg CO_2/Passenger - km	India GHG program Version 1.0 2015	13723.20
Air travel international	mile		Int. flight travel-short haul	0.207 kgCO2/mile		4.35
	km	16811.4	Int. flight travel-medium haul	0.129 kgCO2/mile		2168.67
			Int. flight travel-long haul	0.163 kgCO2/mile		0
Employee commuting						
Small car	km	--	Diesel vehicle	0.13721	India GHG program Version 1.0 2015	0
Large car	km	22111	Diesel vehicle	0.20419	India GHG program Version 1.0 2015	4514.845
Average car	km	13417	Diesel vehicle	0.16844	India GHG program Version 1.0 2015	2259.96
Small car	km	8662	Petrol vehicle	0.14836	India GHG program Version 1.0 2015	1285.09
Average car	km	--	Petrol vehicle	0.1743	India GHG program Version 1.0 2015	0
Large car	km	--	Petrol vehicle	0.27807	India GHG program Version 1.0 2015	0
Medium car	km	--	Hybrid car	0.10698	India GHG program Version 1.0 2015	0
Water treatment						
Water supply	m^3	1150	Water extracted	0.344	India GHG program Version 1.0 2015	395.6
Water treatment	m^3	700	Water treated	0.708	India GHG program Version 1.0 2015	495.6
Purchased goods and services						
	tonnes	19926	Aggregates	7.77	India GHG program Version 1.0 2015	154825.02
	tonnes	2000	Metals	3894.22	India GHG program Version 1.0 2015	7788440
	tonnes	22	Glass	843	India GHG program Version 1.0 2015	18546
	tonnes	13.5	Food and drinks	3701.4	India GHG program Version 1.0 2015	49968.9
	tonnes	47	Compost	113.31	India GHG program Version 1.0 2015	5325.57
	tonnes	9.7	Metals: aluminium	9122.64	India GHG program Version 1.0 2015	88489.608
	tonnes	26	Metal: scrap metal	3567.6	India GHG program Version 1.0 2015	92757.6
	tonnes	0.01	Plastics: average plastic film	2574.16	India GHG program Version 1.0 2015	25.7416

	tonnes	40	Paper and board: paper	919.4	India GHG program Version 1.0 2015	36776
Total ($kgCO_2e$)						**8260001.75**

Scope 3's dominant share of the emissions highlights the interconnected nature of the university's operations and the extensive reach of its environmental impact. Addressing these emissions will require collaboration across departments, suppliers, and external stakeholders.

8.4.1 Total Carbon Footprint from Scope-1, Scope-2 and Scope-3

Scope (Source of GHG Emission)	CO_2 e (Kg/ Annum)	CO_2 e (Tons/ Annum)
Scope-1 (Direct Emissions from Company owned sources)	857643.3	857.64
Scope-2 (Indirect Emissions from Power/ Heat/ Steam etc.)	10160.15	10.16
Scope-3 (Other Indirect Emissions from Transportation / Travelling , Waste management and Water supply etc.)	8260001.75	8260.00
Total CO_2 e	**9127805.20**	**9127.81**

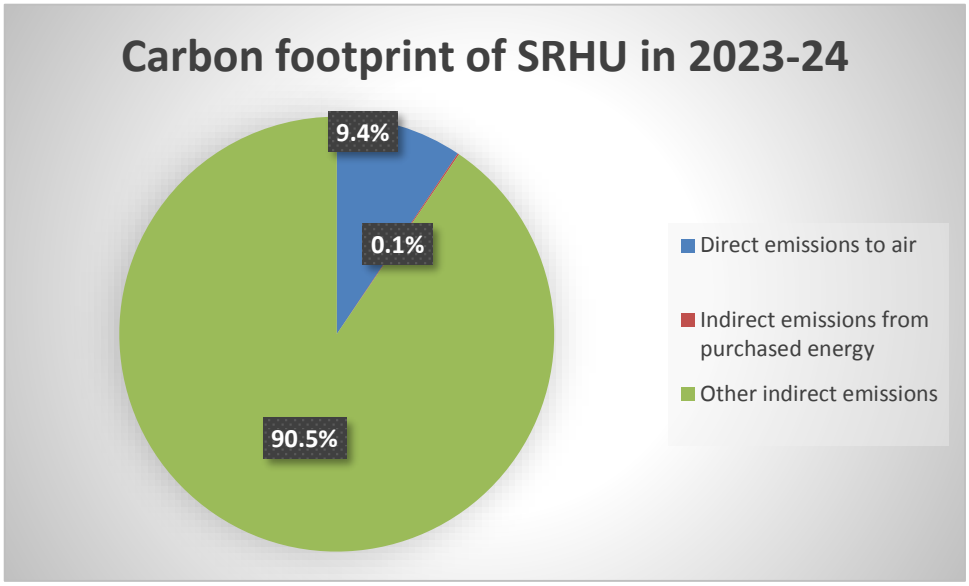

Figure 8.1. Carbon Footprints of the university in 2023-24 (tons/annum)

Key Findings:

- **Scope 1 Emissions:** These include direct emissions from sources owned or controlled by the university, such as fuel combustion in vehicles and stationary equipment. Scope 1

emissions amount to 857.64 tCO_2e, primarily driven by the use of diesel and petrol in transportation and power generation.

- **Scope 2 Emissions:** Indirect emissions from purchased electricity contribute 10.16 tCO_2e. This highlights the university's dependency on the regional power grid and underscores the importance of energy efficiency and renewable energy adoption.
- **Scope 3 Emissions:** Other indirect emissions account for the largest share, at 8260 tCO_2e. These include emissions from activities such as employee and student commuting, waste management, and procurement. The dominance of Scope 3 emissions indicates significant environmental impacts stemming from the university's supply chain and operational activities.

Total Emissions: The combined emissions from all three scopes total 9127.8 tCO_2e, positioning Scope 3 as the primary contributor (90.49%) to the university's carbon footprint. This finding aligns with global trends where Scope 3 emissions often outweigh direct and energy-related emissions in complex institutions like universities.

Significance of the Findings: The results of this analysis provide SRHU with valuable insights into its emission hotspots. While Scope 1 and Scope 2 emissions are relatively moderate, the overwhelming contribution from Scope 3 highlights areas that require targeted interventions. Addressing these emissions will be crucial for achieving substantial reductions and enhancing the university's sustainability profile.

Comparative Insights: In comparison with peer institutions, SRHU's emissions profile reflects typical challenges faced by universities in India, where indirect emissions dominate due to reliance on extensive supply chains and commuting activities. This comparative understanding allows SRHU to align its sustainability initiatives with global best practices while addressing region-specific challenges.

Strategic Importance: Understanding the breakdown of emissions is vital for SRHU's long-term sustainability strategy. By addressing the significant contributors to its carbon footprint, the university can position itself as a leader in environmental stewardship, benefiting from enhanced reputation, compliance with emerging regulations, and potential cost savings through efficiency improvements.

Opportunities for Improvement: The assessment also reveals several opportunities for SRHU to reduce its emissions footprint, including transitioning to renewable energy, optimizing resource use, and fostering behavioral changes among its stakeholders. Implementing these measures will not only mitigate the university's environmental impact but also inspire the broader community to adopt sustainable practices.

8.5 Summary and Insights

1. **Emission Proportions:**
    - Scope 3 accounts for 90.49% of total emissions, indicating that indirect activities are the largest contributors.
    - Scope 1 and Scope 2 emissions together account for only 9.50% of the total footprint.
2. **Key Emission Sources:**
    - Transportation and fuel usage are significant within Scope 1.
    - Energy consumption from purchased electricity is the sole contributor to Scope 2.
    - Supply chain and commuter emissions dominate Scope 3.
3. **Benchmarking:**
    - Compared to similar institutions, SRHU's heavy reliance on indirect activities highlights areas for focused interventions, particularly in supply chain emissions and energy efficiency.

8.5.1 Scope 1 Mitigation

- **Transition to Cleaner Vehicles:** Replace diesel and petrol vehicles with electric or hybrid alternatives to reduce emissions from university-owned fleets.
- **Optimizing Fuel Usage:** Implement efficient route planning and driver training programs to reduce fuel consumption in existing vehicles.
- **Alternative Energy Sources:** Phase out diesel generators by investing in renewable energy backup systems such as solar and battery storage.

8.5.2 Scope 2 Mitigation

- **Renewable Energy Investments:** Install solar panels on campus buildings to generate clean electricity and reduce dependence on the grid.
- **Energy Efficiency Programs:** Retrofit campus infrastructure with energy-efficient appliances, such as LED lighting, energy-saving HVAC systems, and advanced energy monitoring systems.
- **Behavioral Interventions:** Conduct awareness campaigns to encourage energy-saving practices among students and staff, such as turning off lights and appliances when not in use

8.5.3 Scope 3 Mitigation

- **Sustainable Transportation Initiatives:** Promote carpooling, cycling, and public transportation. Develop incentives for electric vehicle use and expand charging infrastructure on campus.
- **Comprehensive Waste Management:** Introduce a robust waste segregation system and establish composting facilities for organic waste. Expand recycling programs for paper, plastic, and electronic waste.
- **Green Procurement Policies:** Partner with suppliers that adhere to environmental standards. Prioritize locally sourced and sustainable products to reduce emissions from transportation and production.
- **Digital Transformation:** Minimize business travel by leveraging virtual conferencing technologies. Digitize administrative processes to reduce paper and logistical needs.
- **Community Engagement:** Collaborate with local communities to implement shared sustainability projects, such as tree planting drives and renewable energy installations.

8.5.4 Monitoring and Reporting

- **Carbon Accounting Tools:** Use advanced tools to regularly track and report GHG emissions across all scopes.
- **Annual Sustainability Reports:** Publish detailed annual reports to share progress, challenges, and future goals.

- **Stakeholder Engagement:** Establish a sustainability committee comprising faculty, staff, and students to guide and oversee implementation efforts.

8.6 Carbon Sequestration (Carbon Offset) by SRHU campus

8.6.1 Carbon Sequestration / Offset by Tree Plantation

Carbon Sequestration / Offset by a single tree = 25 kg CO_2/ Year

Tree plantation in SRHU Campus = 4768 Trees

Table 8.2. Carbon Sequestration / Offset by Tree Plantation

Rate of Carbon Sequestration / Offset by a tree (CO_2 Kg/ Annum)	Total Plantation of Trees	Carbon Sequestration / Offset by trees (CO_2 Kg/ Annum)
25	4768	1,19,200

8.6.2 Carbon Sequestration / Offset by Solar Power

Solar Power installation capacity: 1500 kw

Load capacity @ 80% efficiency: 1200 kw

Working hours in a day: 10 hrs

Table 8.3. Carbon Sequestration / Offset by Solar Power

Installation capacity of Solar Plant (kw)	Load capacity @ 80% (kw)	Duration of Solar Power utilization (hrs/ day)	Days of working in a year	Solar Power Generation (kwh/ Year)	Factor of Carbon Offset by Solar Power (per kwh)	Carbon Sequestration / Offset (CO_2 Kg/ Annum)
1500	1200	10	365	43,80,000	0.8	35,04,000

Total Carbon Sequestration / Offset

Total Carbon Sequestration / Offset	
Carbon Sequestration / Offset by Trees Plantation (CO_2 Kg/ Annum)	1,19,200
Carbon Sequestration / Offset by Solar Power (CO_2 Kg/ Annum)	35,04,000
Total Carbon Sequestration / Offset (CO_2 Kg/ Annum)	**36,23,200**
Total Carbon Sequestration / Offset (CO_2 Tons/ Annum)	**3623.2**

Carbon Credit of SRHU Campus

- Carbon Footprint of SRHU campus = 9127.8 Tons CO_2/ Year
- Carbon Sequestration/ Offset by SRHU campus = 3623.2 Tons CO_2/ Year
- **Carbon Credit of SRHU campus = 9127.8 – 3623.2 = 5504.6 Tons CO_2/ Year**

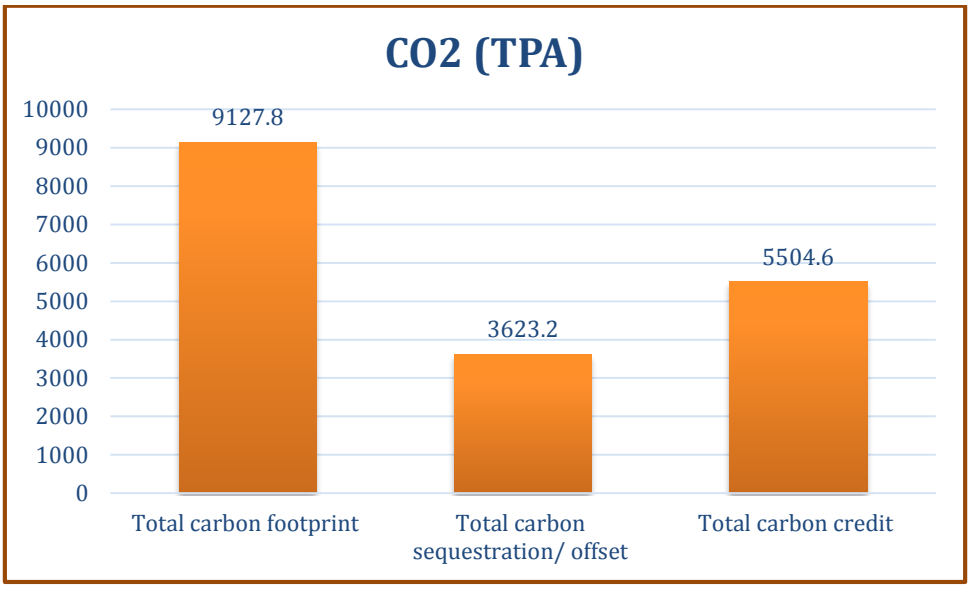

Figure 8.2. Carbon Footprint & Carbon Credit in 2023-24

8.7 Conclusion & Recommendation

The carbon footprint assessment for SRHU University for the academic year 2023-24 reveals a total emission of **9127.8 tons of CO_2**, encompassing Scope-1, Scope-2, and Scope-3 emissions. While there was an increase in total emissions compared to the 2022-23 academic year (8347.65 tons CO_2/year), this was primarily due to expanded operational activities and associated indirect emissions under Scope-3.

Despite the increase, the university successfully sequestered/offset **3,623.2 tons CO_2**, resulting in a net carbon credit of about **5504.6 tons CO_2**. The sequestration efforts demonstrate SRHU's commitment to sustainable practices, particularly through initiatives like afforestation and renewable energy integration. However, the rising Scope-3 emissions underscore the need for enhanced measures targeting indirect emissions related to transportation, waste management, and water supply.

8.8 Reducing the Carbon Footprints

1. Focus on Reducing Scope-3 Emissions

- Develop and promote sustainable transportation options for students and staff, such as electric shuttle services or carpooling incentives.
- Improve waste management systems by increasing recycling initiatives and adopting waste-to-energy technologies.
- Collaborate with vendors and suppliers to ensure sustainability throughout the supply chain.

2. **Enhance Energy Efficiency (Scope-2)**
   - Transition further towards renewable energy sources, such as increasing on-campus solar energy installations.
   - Implement energy-efficient practices across campus buildings, including LED lighting and smart energy monitoring systems.
3. **Strengthen Sequestration Programs**
   - Expand green cover on campus by planting more native and high-carbon-sequestering trees.
   - Introduce carbon farming practices and explore opportunities for offsetting through community-driven environmental programs.
4. **Education and Awareness Programs**
   - Engage students, faculty, and staff in carbon footprint reduction through targeted workshops and campaigns.
   - Integrate sustainability modules into academic curricula to instill environmental consciousness.
5. **Establish Long-Term Sustainability Goals**
   - Set year-on-year targets for emission reduction aligned with national and global climate goals.
   - Regularly monitor and publicly disclose carbon performance to ensure accountability and inspire others in the academic sector.

By addressing these key areas, SRHU University can significantly reduce its carbon footprint while reinforcing its position as a leader in sustainability and climate action within the academic community.

Chapter – 9

Recommendations

Chapter - 9

9 Recommendations

9.1 Management of domestic waste water

Management of domestic waste water with STP of capacity 1MLD respectively is found satisfactory.

Table 9.1. Management of domestic waste water by the university

STP	Water Treatment Load (2023-24)	Observation	Recommendation
STP 1 MLD	902 KLD	Performance found to be satisfactory. Treated water in the range 700-750 KLD from SRHU is being used for plantation in 1,60,800 sq.m. of area and landscaping of land	Sufficient facility for sewage treatment and needs to be regular maintenance for smooth operation of Plant

9.1.1 Management of solid waste

Management of solid wastes by authorized vendors is found satisfactory.

Table 9.2. Management of solid waste by the university

Type of Waste	Disposal in 2023-24	Observation	Recommendation
Solid Waste – Non biodegradable scrap	550-600 kg per day handed over to authorized venders	Non biodegradable scrap waste is handed over to authorized recyclers	Recycle and reuse facility needs to established for optimum resource utilizaton and reduce the stress on natural resources.

9.1.2 Management of biodegradable waste

Management of biodegradable wastes by manure pits is recomended.

Table 9.3. Management of biodegradable waste by the university

Management of Biodegradable Waste	Disposal in 2023-24	Observation	Recommendation
Kitchen Waste	Approx 300 kg per day	Handed over to local cattle keepers and pig farmers to feed the animals.	Management of manure pits in coming subsequent years in a phased manner to convert wealth from waste i.e. organic manures for plantation and agrofarming activities as a sustanaible practice.
Biomass & plant leaves	Disposal of 10 kg per day converted to manures of 1-2 kg per day	Manures utilized for Agrofarming and plantation areas in about 1,60,800 sq.m.	

9.1.3 Biogas Plant

Efforts of the SRHU for the installation of Biogas plant to manage the biodegradable wastes to redusce the stress on natural resources and to prevent enviornmental degradation is remarkable and appreciable .

Table 9.4: Management of biogas plant by the institute

Description	Observation	Recommendation
Biogas Plant	Installation of Biogas plant of capacity 4 cum/day by the institute has been a good and eco friendly effort to reduces the waste to protect environment and natural resources.	To gain maximum utilization of biodegradable waste and zero dischare and to achive cheap and clean energy recource, biogas plant at a large extent needs to be installed in coming subsequent years.

9.1.4 Management of Hazardous & Bio-medical waste

Management of Hazardous & Biomedical wastes by authorized vendors is found satisfactory.

Table 9.4. Management of hazardous waste by the university

Management of Hazardous Waste	**Disposal in 2023-24**	**Observation**	**Recommendation**
Hazardous Waste – Used oils from DG sets and other electrical appliances	Approx. 615 liters per year	Handed over to authorized vendor for proper disposal and utilized in maintenance and construction work	Management of dedicated storage sites and storage record of hazardous waste to prevent environmental contamination and proper disposal
Bio-medical waste from hospital facilities, laboratories etc.	Approx. 500 kg per day	Sent to central incineration facility through State pollution department authorised vendor.	The segregation of Bio-medical wste should in specific well labled bins. The bins should be treated using different sterilization methods. The waste should be handeled scientifically to avoid adverse effects on human health and the environment.

9.1.5 Environmental management

- Management of indoor air quality in respect to visual comfort, thermal comfort, noise levels, heat stress and ventilation/ air exchange rate found to be satisfactory as per regulatory requirements.
- Outdoor air quality of the university in respect to particulate aerosols (PM10, PM2.5), gaseous pollutants and air quality index (AQI) found to be satisfactory as per regulatory guidelines and human health requirements.

- Dependency of electrical power needs to be reduced by adopting renewable energy resources as solar and wind energy to achieve the target of 70% of the total energy demand and to reduce carbon credit of the university at a large extent.
- The recycle and reuse practices such as 'wealth from waste' for solid waste and effluent waste management with zero discharge should be adopted to reduce the stress on natural resources and prevent environmental degradation.
- Biogas pant at a large scale to be adopted to manage the biodegradable wastes and to produce clean energy source for cooking and lighting purpose.
- Increase green belt areas alongside the boundaries and road networks of the university and in the local areas as village communities, panchayat lands and forestry areas at a large extent to reduce carbon credit of the university and to achieve the responsibility of green management.
- Plantation and Garden areas with sufficient green belt in the SRHU premises are found well maintained. A remarkable achievement in green campus management.
- ***Initiative for carbon accounting such as adequate common transportation facilities*** for all students and staff should be provided by the university.
- A ***model solid waste management system based on 3R's (reduce, reuse and recycle)*** to be established to reduce undue pressure on municipal system and to convert solid wastes into valuable resources.
- Encourage students and staff to use cycles and follow ***"No Vehicle Day in every week"*** to save fuel consumption.
- The "***Green computing or E-work"*** is helping the organization to reduce footprint very effectively.
- Establish a system of "***Carpooling among the staff and students"*** to reduce the number of four wheelers coming to the university.
- Go for ***Green Building Concept*** in phased manner to achieve the goal in next five-year plan.
- ***Adoption of more rain water harvesting systems*** to fill the gap of huge water demand and water resource conservation to protect environment and water resources.

Figure 9.1. Basic and Fundamental Components of environmental sustainability

Chapter - 10

Preparation of Audit Action Plan

Chapter – 10

10 Preparation of Audit Action Plan

In pursuit of sustainable development, it is imperative to form a dedicated committee comprising faculty and students to oversee energy audit, green audit, and environmental audit. The development and implementation of comprehensive policies are crucial to manage our resources efficiently. Embracing green and environmental policies, along with training programs and eco-friendly procurement, will further solidify our commitment to creating a green campus.

10.1 Implementing the Green Management

Formation of Committees and Policies

To ensure effective management of energy, green practices, and environmental aspects, the establishment of committees comprising diverse stakeholders is essential. This committee will act as a driving force behind the implementation of sustainable initiatives and policies on campus. Faculty and student involvement will bring diverse perspectives and innovative ideas to the table, enhancing our overall approach towards sustainability.

Green Policy and Environmental Policy

A clear and robust green policy and environmental policy to be formulated to guide the sustainable development journey. These policies will outline the commitment to reducing carbon emissions, conserving resources, promoting eco-friendly practices, and preserving biodiversity. By adhering to these policies, we will strengthen our pledge to environmental stewardship.

Implementing the Environmental Policy

Formulating policies is just the first step; meticulous implementation is vital for their success. It must diligently implement the environmental policy, incorporating sustainable practices in all aspects of campus life. From waste management to energy conservation, each action contributes to our shared vision of a greener and more sustainable campus.

Training Programs and Procurement Policy

Raising awareness about environmental practices is vital among ground staff and kitchen staff. Implementing comprehensive training programs will empower them to play an active role in

our sustainability initiatives. Additionally, adopting an environment-friendly procurement policy will guide our purchasing decisions, favoring eco-friendly materials and products.

Value of Green Audits

Green audits generate valuable management information essential for sustainable growth. The efforts and resources invested in these audits are justified by the wealth of insights they provide. To maximize the impact of these audits, we must ensure that the findings and recommendations are addressed at the appropriate organizational level, leading to the development of action plans and implementation programs.

Audit Follow-up for Continuous Improvement

To create a lasting impact, it is crucial to incorporate audit follow-up as part of the process of continuous improvement. This ensures that the audit results do not become isolated events but serve as the foundation for ongoing improvement initiatives. By continually monitoring progress and adapting our approach, we reinforce our commitment to sustainability

10.2 Completion of Audit Survey & Exit Meeting

The exit meeting was conducted jointly by the experts of Ecoscience Consultancy and the team members of the university. It was a mechanism to provide the management and staff a broad feedback on the preliminary findings of the audit team before completing the audited report. Clarification on certain information gathered was sought by the audit team from the management and staff of the university.

10.3 Audit Reporting

Draft Audit Report

The information gathered by the audit team was consolidated as a draft audit report. This draft report was then circulated to the audit team and those directly concerned with the audit to check the report for accuracy. The draft green audit report was also discussed in the exit meeting.

Final Audit Report

The final audit report is the corrected final document which contains the findings and recommendations of the audit. It will also form one of the bases of future audits because the

information it contains informs some of the tests and analyses that need to be performed in the future. Final Audit Report was submitted to the Principal / Director of the university.

Follow Up and Action Plans

Green audits form a part of an on-going process. Innovative green initiatives have to be designed and implemented every year to make the university environmentally sustainable. Follow up programs of green auditing recommendations should be done meticulously before next audit.

Next Audit

In order to promote continuous improvement, it is recommended to conduct the next green auditing during next Cycle of NAAC approval.

10.4 Transparency of Green Audit Report

Green audit reports serve as a powerful tool to showcase an organization's commitment to openness and transparency in its environmental practices. As an institution dedicated to sustainability, firmly believes in embracing transparency as a core value. Making green audit reports freely available to all stakeholders is not only a demonstration of our confidence in our environmental efforts but also a testament to our commitment to fostering an informed and engaged community.

A Commitment to Openness

Transparency is the cornerstone of any responsible and ethical organization. By willingly sharing green audit reports, communication of commitment to transparency and accountability in environmental initiatives. Stakeholders have a right to know about our environmental performance, and believe in honoring that right by providing easy access to relevant information.

Empowering Stakeholders

All stakeholders of SRHU including students, faculty, staff, community members, and other interested parties, play a crucial role in shaping the sustainability journey. By making the green audit reports readily available, we can empower them to be informed participants in environmental efforts. It fosters a sense of ownership and shared responsibility for our sustainability goals.

Building Trust and Credibility

Transparency builds trust. By openly sharing our green audit reports, we invite scrutiny, feedback, and constructive criticism, which ultimately enhances our credibility as an environmentally responsible institution. Embracing openness encourages constructive dialogue and collaboration, leading to collective efforts for continuous improvement.

Educating and Inspiring

Green audit reports are not just documents; they are educational resources that can inspire and inform others about sustainable practices. By freely sharing our reports, we contribute to raising awareness about environmental challenges and inspire others to adopt greener practices, promoting sustainability beyond our campus.

Accessibility for All

As a basic rule, green audit reports should be easily accessible to all stakeholders. It should be committed to making the reports available through various channels, such as our website, campus notice boards, and upon request. Our goal is to ensure that anyone interested in our environmental performance can easily obtain the information they seek

Chapter - 11

About Ecoscience Consultancy(Consultant)

11 About the Ecoscience Consultancy

Ecoscience Consultancy is a reputed business house working in the field of environment in North India since 2022 with Vision & Mission of "Preventing pollution with Purpose-Bringing profit and goodwill in equal measure". The organization aims that the customers achieve effective compliance with legislation including a better public image and earn from waste. The company comprises of Ecoscience Consultancy - engaged in consultancy & analytical services; Ecoscience Consultancy - engaged in providing engineering solutions and Environment Matters – undertaking capacity building programs in the field of environment.

Ecoscience Consultancy - is a certified ISO 9001:2015 organization providing engineering & turnkey solutions for overall pollution abatement. Committed to a green planet, we strive to use our world-class resources to give environmentally safe solutions to our customers. We provide engineering and turnkey solutions for pollution control and recycling including:

Sewage Treatment Plants.

Effluent Treatment Plants.

Ultra Filtration-RO Combination Systems for Effluent recycling.

Wastewater Treatment Equipment's & Components- Aeration Systems.

Nano Bubble Technology

Disinfection Systems-Ozone/UV based.

Sludge Handling Systems-Filter Press/Bags.

Air Pollution Control Systems.

Noise Attenuation.

Solid Waste Management Systems- Ecoster.

KEY RECOGNITIONS/ACCREDITATIONS OF CONSULTANT

ISO 9000:2015, ISO 14001:2015, ISO 45001:2018. ISO 50001:2015, ISO/IEC 17020:2012 certified.

TÜV NORD

PR315: ISO 14001:2015 Lead Auditor (Environmental Management Systems) Training course

Certificate of Achievement

Gurpreet Singh Saggu

has successfully passed all the course assessment requirements.

27th - 28th May & 02nd - 04th June 2023

INDIA

Certificate No. 35350181 05r

Unique Learner No. 487635

Katja Beyer
for TÜV NORD CERT GmbH

Essen, 2023-09-04

Note: The course is certified by CQI and IRCA (Certification No. 18125). The learner meets the training requirements for those seeking certification under the IRCA EMS Auditor certification scheme. The certificate is valid for 5 years, starting from the last day of the course, for the purpose of IRCA auditor certification.

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Certificate

Academy Division of TÜV SÜD South Asia Pvt. Ltd. hereby certifies that

Gurpreet Singh Saggu

has participated in the course

Carbon Footprint Of Products Lead Implementer in Accordance with ISO 14067:2018

from 22.06.2024 to 23.06.2024 and passed the final examination in accordance with the guidelines of TÜV SÜD South Asia Pvt. Ltd.

Date of certificate release: 01.08.2024
Place of printing: Ahmedabad

Vishal Nerurkar
Sr. Vice President

Certificate No.: IN/37496/405389

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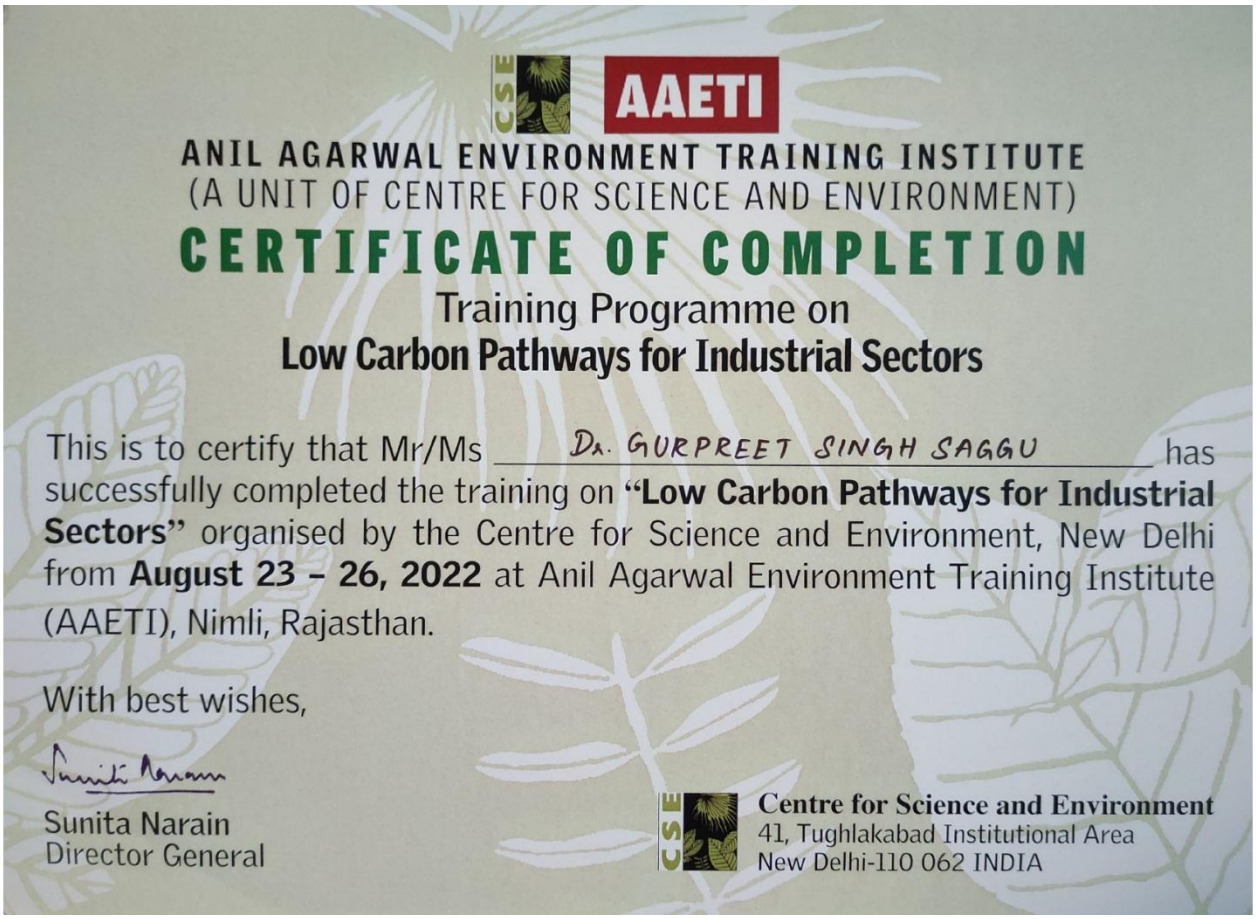

AAETI

ANIL AGARWAL ENVIRONMENT TRAINING INSTITUTE
(A UNIT OF CENTRE FOR SCIENCE AND ENVIRONMENT)

CERTIFICATE OF COMPLETION

Training Programme on
Low Carbon Pathways for Industrial Sectors

This is to certify that Mr/Ms Dr. GURPREET SINGH SAGGU has successfully completed the training on **"Low Carbon Pathways for Industrial Sectors"** organised by the Centre for Science and Environment, New Delhi from **August 23 – 26, 2022** at Anil Agarwal Environment Training Institute (AAETI), Nimli, Rajasthan.

With best wishes,

Sunita Narain
Director General

Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi-110 062 INDIA

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UTTARAKHAND STATE -249402, INDIA.

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and is compliant with the requirement of:

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PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011408Q

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Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

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Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011410HS

QRO QUALITY RESEARCH ORGANIZATION
EGAC CAB # 011905
MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.
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The Validity of this certificate can be verified at www.qrocert.org
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Website : www.qrocert.org, E-mail : info@qrocert.org

Certificate of Compliance

This is to certify that the

Conformity Assessment Certification

of

ECOSCIENCE CONSULTANCY

at

LAKSHMI VIHAR COLONY, BAHADRABAD, HARIDWAR
UTTARAKHAND STATE -249402, INDIA.

has been independently assessed and is
compliant with the requirements of:

ISO/IEC 17020:2012

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Certificate Number: UQ - 2025011405

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification	14th January 2025
1st Surveillance Audit Due	13th January 2026
2nd Surveillance Audit Due	13th January 2027
Certificate Expiry	13th January 2028

Authorised Signatory

QRO
QUALITY RESEARCH ORGANIZATION

Certificate of Registration

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ECOSCIENCE CONSULTANCY

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UTTARAKHAND STATE -249402, INDIA.

has been independently assessed by QRO
and is compliant with the requirement of:

ISO 50001:2018

Energy Management Systems

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011411EN

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Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.
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Fig. 12.1: Accreditation Certificates

****

***** End of Report *****

TÜV NORD

PR315: ISO 14001:2015 Lead Auditor (Environmental Management Systems) Training course

Certificate of Achievement

Gurpreet Singh Saggu

has successfully passed all the course assessment requirements.

27th - 28th May & 02nd - 04th June 2023

INDIA

Certificate No. 35350181 05r

Unique Learner No. 487635

Katja Beyer
for TÜV NORD CERT GmbH

Essen, 2023-09-04

Note: The course is certified by CQI and IRCA (Certification No. 18125). The learner meets the training requirements for those seeking certification under the IRCA EMS Auditor certification scheme. The certificate is valid for 5 years, starting from the last day of the course, for the purpose of IRCA auditor certification.

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

CQI | IRCA
CERTIFIED COURSE

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD South Asia

Certificate

Academy Division of TÜV SÜD South Asia Pvt. Ltd. hereby certifies that

Gurpreet Singh Saggu

has participated in the course

Carbon Footprint Of Products Lead Implementer in Accordance with ISO 14067:2018

from 22.06.2024 to 23.06.2024 and passed the final examination in accordance with the guidelines of TÜV SÜD South Asia Pvt. Ltd.

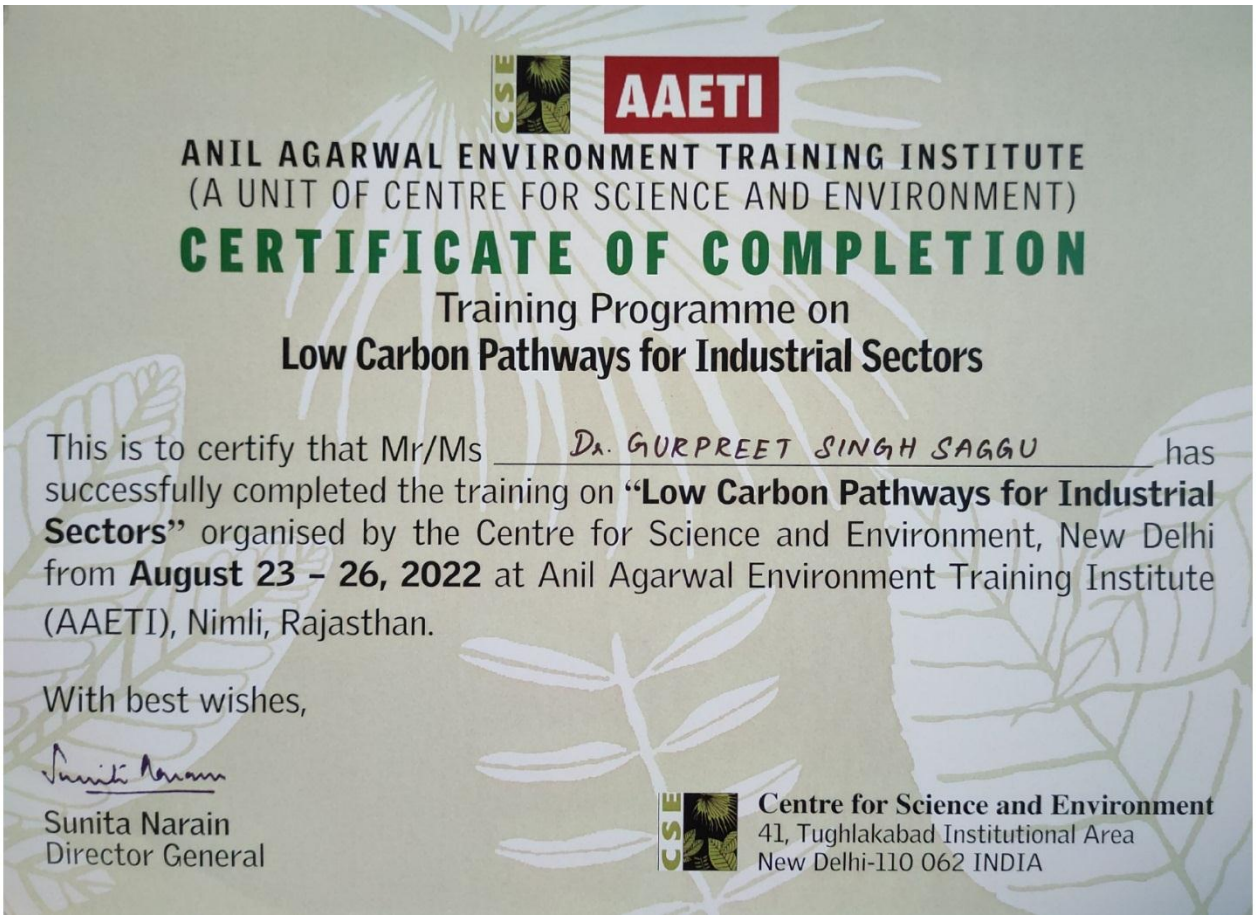
Date of certificate release: 01.08.2024
Place of printing: Ahmedabad

Vishal Nerurkar
Sr. Vice President

Certificate No.: IN/37496/405389

TÜV SÜD South Asia Private Limited – Off Saki Vihar Road – Andheri (E) – Mumbai

TÜV®



AAETI

ANIL AGARWAL ENVIRONMENT TRAINING INSTITUTE
(A UNIT OF CENTRE FOR SCIENCE AND ENVIRONMENT)

CERTIFICATE OF COMPLETION

Training Programme on
Low Carbon Pathways for Industrial Sectors

This is to certify that Mr/Ms Dr. GURPREET SINGH SAGGU has successfully completed the training on **"Low Carbon Pathways for Industrial Sectors"** organised by the Centre for Science and Environment, New Delhi from **August 23 – 26, 2022** at Anil Agarwal Environment Training Institute (AAETI), Nimli, Rajasthan.

With best wishes,

Sunita Narain
Director General

Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi-110 062 INDIA

QRO
QUALITY RESEARCH ORGANIZATION

Certificate of Registration

This is to certify that

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UTTARAKHAND STATE -249402, INDIA.

has been independently assessed by QRO
and is compliant with the requirement of:

ISO 9001:2015

Quality Management System

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011408Q

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MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

Head of Certification

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ISO 14001:2015

Environmental Management System

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011409E

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MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

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UTTARAKHAND STATE -249402, INDIA.

has been independently assessed by QRO
and is compliant with the requirement of:

ISO 45001:2018

Occupational Health and Safety Management System

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
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2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011410HS

QRO QUALITY RESEARCH ORGANIZATION
EGAC CAB # 011905
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Website : www.qrocert.org, E-mail : info@qrocert.org

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This is to certify that the

Conformity Assessment Certification

of

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LAKSHMI VIHAR COLONY, BAHADRABAD, HARIDWAR
UTTARAKHAND STATE -249402, INDIA.

has been independently assessed and is
compliant with the requirements of:

ISO/IEC 17020:2012

For the following scope of activities:

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Certificate Number: UQ - 2025011405

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification	14th January 2025
1st Surveillance Audit Due	13th January 2026
2nd Surveillance Audit Due	13th January 2027
Certificate Expiry	13th January 2028

Authorised Signatory

UKAF

UK Certification & Inspection Ltd.

This certificate is the property of UK Certification & Inspection Limited and shall be returned immediately on request.
71-75 Shelton Street, Covent Garden, London, WC2H 9JQ, United Kingdom
Website:- www.ukcertifications.org.uk, email:- info@ukcertifications.org.uk
Company No. 11847851

QRO
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UTTARAKHAND STATE -249402, INDIA.

has been independently assessed by QRO
and is compliant with the requirement of:

ISO 50001:2018

Energy Management Systems

For the following scope of activities:

PROVIDING EXPERT SOLUTION IN THE FIELD OF ENVIRONMENT MONITORING, WASTEWATER MANAGEMENT (ETP/STP INSTALLATION AND MAINTENANCE), THIRD PARTY AUDITS (FOR WASTE MANAGEMENT), GREEN AUDITS, ENERGY AUDITS, CARBON FOOTPRINT.

Date of Certification: 14th January 2025
1st Surveillance Audit Due: 13th January 2026
2nd Surveillance Audit Due: 13th January 2027
Certificate Expiry: 13th January 2028

Certificate Number: 305025011411EN

QRO QUALITY RESEARCH ORGANIZATION
EGAC CAB # 011905
MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.
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Website : www.qrocert.org, E-mail : info@qrocert.org

Fig. 12.1: Accreditation Certificates

****

***** End of Report *****

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Himalayan Institute Hospital Trust		
Project Address:	Swami Ram Nagar, Jolly Grant		
Village:	Jauligrant	Block:	Doiwala
District:	Dehradun	State:	Uttarakhand
Pin Code:			
Communication Address:	Swamy Ram Nagar, Jolly Grant, Doiwala, Doiwala, Dehradun, Uttarakhand - 248016		
Address of CGWB Regional Office :	Central Ground Water Board Uttarakhand Region, 419-a, Kanwali Road, Baluwala , Near Urja Bhawan, Dehradun, Dehradun, Uttarakhand - 248001		

1.	**NOC No.:**	CGWA/NOC/INF/REN/1/2022/7167			
2.	Application No.:	21-4/923/UT/INF/2017	3.	Category: (GWRE 2020)	Safe
4.	Project Status:	Existing Ground Water	5.	NOC Type:	Renewal
6.	**Valid from:**	23/01/2022	7.	**Valid up to:**	22/01/2027

8. Ground Water Abstraction Permitted:

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
1150.00	419750.00						

9. Details of ground water abstraction /Dewatering structures

	Total Existing No.:3						Total Proposed No.:0					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	0	3	0	0	0	0	0	0	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps

10.	Ground Water Abstraction/Restoration Charges paid (Rs.):	833677.00

11.	Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers	Monitoring Mechanism		
			Manual	DWLR**	DWLR With Telemetry
	**DWLR - Digital Water Level Recorder	2	0	1	1

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.

2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.

3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.

4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.

6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.

7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.

8) Industries abstracting ground water in excess of 100 m 3 /d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.

9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).

12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).

13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.

14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.

15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.

16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.

17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.

18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.

19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.

20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.

21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.

22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.

24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.

25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.

26) In case of new infrastructure projects having ground water abstraction of more than 20 m3/day, the firm/entity shall ensure implementation of dual water supply system in the projects.

27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.

28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.

29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

Swami Rama Himalayan University

Detail of Rain water harvesting with filter bed and recharge pit				
S.No.	**Location**	**Pit No**	**Specification**	**Remarks**
1	Near Guest house with filter bed	3	filter bed-6.42x2x.1.50m / pit 3.75x 6m depth	Under Ground water recharge pit
2	Near Lab Building pit	1	filter bed 6x3x2 / pit 3.75X 6m depth	
3	Medical college (courier parking) Recharge pit	2	2.0m dia x 6.0 Depth	
4	Nsg College (nursery side) Recharge pit-1	9	1.5 m dia x 6 m depth	
5	Nsg College sport ground Recharge pit-2	5	3.75m dia x 6 m depth	
6	New OPD (front nsg hostel side)	10	filter bed and pit (3m dia x 12 m depth)	
7	New OPD (near cardic center side)	6	filter bed and pit (3m dia x 12 m depth)	
8	New OPD (behind mess side)	4	filter bed and pit (3m dia x 12 m depth)	
Detail of Rain water with filter bed and borewell				
S.No.	**Location**	**Pit No**	**Specification**	Under Ground water recharge pit
9	PG hostel with borewell	12	filter bed 6.42m X 2m X1.50m	
10	Tubewell Recharge borewell	8	filter bed 1.50mX1.50mX1m	
11	MbbS Hostel with borewell	11	filter bed and tank /8.0 x 3.0 x 2 m Depth	
Detail of Rain water recharge pit				
S.No.	**Location**	**Pit No**	**Specification**	
12	Medical College Near SBI Bank RWH with filtration Uttarakhand Nalkoop	7	12.78 x 4.18 x 2.80 m	The Rain water harvesting underground tank with advance filtration unit being used for flushing system in toilets of Nursing College, Medical College, Tank Cap- 150 KL
	Medical College Near SBI Bank RWH (Recharge Pit)		3.0 Dia x 3.35 depth	Recharge Pit
13	Hospital Recharge pit	13	4m x4m x5m	Under Ground water recharge pit
14	MBBS Girls Hostel Recharge pit	14	3.0 Dia x 3.35 depth	
15	Rainwater harvesting recharge pit with advance filtration unit front Pharmacy College	15	3.0 Dia x 3.35 depth	

REGISTRAR
SWAMI RAMA HIMALAYAN UNIVERSITY
Swami Ram Nagar, Jolly Grant
Dehradun-248016, Uttarakhand, India

सत्यमेव जयते

IN-UK15034018090230W

INDIA NON JUDICIAL

Government of Uttarakhand

e-Stamp

Certificate No.	:	**IN-UK15034018090230W**
Certificate Issued Date	:	04-Apr-2024 04:56 PM
Account Reference	:	NONACC (SV)/ uk1239204/ DOIWALA/ UK-DH
Unique Doc. Reference	:	SUBIN-UKUK123920436816429384613W
Purchased by	:	SWAMI RAMA HIMALAYAN UNIVERSITY
Description of Document	:	Article Miscellaneous
Property Description	:	NA
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SWAMI RAMA HIMALAYAN UNIVERSITY
Second Party	:	BHARAT OIL AND WASTE MANAGEMENT LTD
Stamp Duty Paid By	:	SWAMI RAMA HIMALAYAN UNIVERSITY
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Incl.....
Ritu Aggarwal
Stamp Vendor
Doiwala Dehradun

Please write or type below this line

AGREEMENT

THIS AGREEMENT made on date **05/04/2024** between **Himalayan Hospital (A Constituent Unit of Swami Rama Himalayan University)** established/incorporated under Companies Act 1956/ Partnership/ Uttarakhand State Act having its registered Office located at **Swami Ram Nagar, Doiwala, Jolly Grant, Dehradun-248016** and its Unit located at **Swami Ram Nagar, Doiwala, Jolly Grant, Dehradun-248016**

established under Section 2(f) of UGC Act 1956 and created vide

For Bharat Oil & Waste Management Ltd.

Director

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

(hereinafter called as "**FIRST PART**" which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors nominees and assigns of the First Part.

AND

M/s **Bharat Oil and Waste Management Ltd** (BOWML), a Company registered under the Companies Act 1956/2015, having its registered office and corporate head office at 11, LGF, Community Center, East Of Kailash, New Delhi 110065 and its engineered common facility at Gata #672, & Gata 706 Cha, Tahsil Akbarpur, Village Kumbhi, NH-2, Kanpur-Dehat, UP-209101, duly authorized by the Uttar Pradesh Pollution Control Board to treat, store, recycle or dispose of Hazardous Waste and / or the E-Waste (Management) Rules 2016 and/or Plastic Waste Management Rules (2016) as amended and having another Facility at **Mauza Mukimpur, Roorkee-Laksar Road, Roorkee-247664, (Uttarakhand)**, duly authorized by the UEPPCB, Dehradun to treat, store, recycle or dispose of Hazardous Waste, E-Waste, Plastic Waste as per respective rules and/ or Bharat Oil Company (India) Registered (BOC) a partnership concern registered under the Partnership Act with its registered office at 169 Kailash Hills, New Delhi 110065, duly registered with Central Pollution Control Board, having its CHWTSDF at E-18, Site IV, Sahibabad Industrial Area, Ghaziabad, (UP), duly authorized by the UPPCB, under the Environment Protection Act 1986 (for short the 'Act')and the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and / or the E-Waste (Management) Rules 2016 (for short 'The Rules') as amended from time to time, represented by its Director/Partner, as the case may be (hereinafter called as "SECOND PART " which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors, nominees and assigns of the Second Part.

WHEREAS first part is engaged in **University (Hospital & Academic)** and whereas during the said manufacturing process/ activities different types of wastes including Hazardous Waste are generated as per Annexure to this Agreement.

AND WHEREAS the First Part desires that the Hazardous Waste, being generated at its production unit mentioned above, to be lifted, transported, treated, stored and disposed of, by utilizing the services of SECOND PART, as per the Pollution Control Board Authorization (list of Hazardous Wastes and their tentative quantity, which would be generated at the FIRST Part's plant located at **Swami Ram Nagar, Doiwala, Jolly Grant, Dehradun-248016** is enclosed herewith marked as Annexure.

AND WHEREAS the SECOND PART has represented and assured to First Part that it's Facility in Kanpur/Roorkee/Sahibabad is duly authorized by the concerned State Pollution Control Board and further capable of handling the Hazardous Waste generated at the First Part premises.

AND WHEREAS First Part has agreed to avail the services of Second Part for treating the Hazardous Wastes, in its above named facility/facilities.

Now, therefore, those present witnessed and it is hereby declared and agreed by and between the Parties as follows:-

1) The scope of services to be provided by SECOND PART is limited to lift, transport through authorized vehicles, treat, store and dispose of Hazardous Waste of FIRST PART as per the guidelines prescribed by Pollution Control Board or FIRST PART can also send HW to SECOND Part's Plant directly at its own cost.

For Bharat Oil & Waste Management Ltd.

Director

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

2) Second Part, on receipt of written information from FIRST PART, will plan and schedule lifting logistics of the Hazardous Wastes from the premises of FIRST PART within 7 (Seven) business days of receipt of such information. First Part shall ensure that Hazardous Wastes must be packed in proper & leak proof Bags or polythene Bags or containers for safe transportation.

3) SECOND PART shall at all times comply with all the provisions of The Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016 as amended from time to time framed by MoEF/CPCB.

4) SECOND PART shall indemnify and keep indemnified FIRST PART from all losses, damages, and third party claims after taking out HW from the premises of the First Part, in cases of non-compliance of statutory norms on the part of SECOND PART.

5) FIRST PART shall keep ready the Hazardous Waste as per the mandate given to SECOND PART for collection, as it is a common facility catering to diverse wastes. SECOND PART shall follow Ministry of Environment & Forest, Central Pollution Control Board and State Pollution Board guidelines, future amendments and latest disposal technologies.

6) FIRST PART shall ensure that the above Hazardous Waste must be packed in proper containers/bags so as to prevent any damage/spillage of the material, during transit to SECOND PART factory. Containers/Bags arranged by FIRST PART shall be of Metallic/PVC/Leak proof Bags and kept at the storage place under cover. Container/Bags weight will also be added in the weight of the material.

7) FIRST PART will provide labour and special Material Handling Equipment's free of cost to lift and load the containers at the FIRST PART premises, in the vehicles for the transportation.

8) FIRST PART has mandatory obligations to provide the entire process detail which leads to generation of Hazardous Waste and its tentative Quantity per month or year to SECOND PART for the purpose of determining the waste characteristics and to decide parameters for comprehensive analysis and process for disposal. However, it is specifically agreed between the parties that the process details provided by FIRST PART shall be kept confidential and Second Part shall not disclose it to any third party without the First Part's prior written consent. This clause shall survive termination for a period of 1 (One) year after the determination of this Agreement for any reason whatsoever.

9) FIRST PART must provide comprehensive Laboratory Analysis Report from a CPCB/Moef approved Laboratory of each type of Hazardous Waste for Finger Print Analysis. These laboratories must be accredited as per the Environment (Protection) Act, 1986 and ISO 17025 through NABL system. In the event there are differences in the analysis results; FIRST PART may send its samples to a mutually agreed THIRD PARTY at their own cost. New Comprehensive Analysis Reports shall be provided by FIRST PART when there is a change in the Hazardous Waste characteristics, manufacturing process or change in the product mix etc. Reports must be provided to SECOND PART prior to scheduling pick-up of Hazardous Waste. Reports shall be sent via Electronic mail as well as by courier/speed post to SECOND PART. As per CPCB Guidelines, HW Rules, comprehensive Laboratory Analysis Report from a CPCB/Moef approved Laboratory of each type of Hazardous Waste is mandatory for direct disposal pathway. Which if not provided by FIRST PARTY shall be performed by SECOND PARTY as per rate schedule of this agreement and FIRST PARTY agrees to pay the costs incurred in performing the test immediately upon demand.

For Bharat Oil & Waste Management Ltd.

Director

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

10) The comprehensive Analysis Report shall determine the disposal Pathway based on the Waste Characteristics and as per Waste Acceptance Criteria given to the FIRST PART and any other condition/solution that would help in safe disposal of Hazardous Waste. Disposal Pathway is mutually agreed between FIRST PART and SECOND PART to finalize the disposal base or basic USER CHARGES. The base User Charges are defined in Annexure to this Agreement.

11) FIRST PART will pay a Membership Deposit **Rs. 1,00,000/- (One Lakh Rupees Only)** to SECOND PART to become member of the common HWTSDF facility. The deposit will be for at least 05 years OR as long as the common HW TSDF is authorized by the UEPPCB to carry out its operations, the deposit will be refunded only after adjusting all dues owed from the FIRSTY PART to SECOND PARTY. No Financial Charges or interest is applicable on the Membership Deposit received by BOWML.

12) FIRST PART will maintain and provide details of the HW as per the provisions in various Forms prescribed in the Rules. These Forms can be provided by SECOND PART at cost or be printed by FIRST PART as per the formats given by the SECOND PART.

13) If FIRST PART provides any false information/declarations or withholds information in relation to the provisions of Hazardous Waste rules and / or E-Waste rules any time during the term of this Agreement, all charges of Hazardous Waste during Transportation, Handling, Treatment and Disposal including post-disposal period shall remain vested at the responsibility of FIRST PART.

14) The charges for Collection, Treatment, Storage, and Disposal Facility (hereinafter called as User Charges) will be applicable to FIRST PART/SECOND PART as per Annexure.

15) FIRST PART shall make payment for Waste management Services to SECOND PART and vice-versa per User Charges and other terms and conditions as per payment terms outlined in Annexure.

16) FIRST PART is responsible to segregate/store/accumulate/fill/load the Hazardous Waste in the container provided by FIRST PART in a neat and proper manner and so also, the container area should be accessible to SECOND PART's vehicle, to come and lift the Waste. The Transporter/SECOND PART reserves the right to reject lifting of Hazardous Waste spilled over the ground and container whose exteriors are soiled by Hazardous Waste spillage due to leakage.

17) In case, for any reason, the SECOND PART's Vehicle is sent back without giving the Hazardous Waste even after being requisitioned by FIRST PART, FIRST PART will have to pay actual transport charges to SECOND PART, for a minimum load of 15 (Fifteen) MT.

18) First Part shall at all times comply with all the provisions of the Acts and Rules from time to time in force and the Guidelines issued from time to time regarding handling of Waste involving the collection, storage, transportation and delivery thereof, and shall, without prejudice to the generality of the foregoing, also comply with all Environmental Protection Laws, Safety Laws and Regulations from time to time in force and the Rules, Regulations and Notifications made or issued thereunder from time to time. In the event of First Part committing any breach of the terms of this clause of Agreement, FIRST PART shall indemnify and keep indemnified SECOND PART from and against all claims, payments, costs and actions of whatsoever nature brought against or sustained or incurred by SECOND PART arising from or as a result of such breach committed by FIRST PART in that behalf, provided these are proved.

For Bharat Oil & Waste Management Ltd.

Director

Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

19) Each PART shall indemnify and keep indemnified the other PART at all times from and against all actions, suits, proceedings, claims, third party claims, costs, payments and expenses of whatsoever nature made or suffered or incurred by the other PART whether by reason of or by virtue of non-performance or non-observance or non-compliance by either PART, of any terms and conditions of this Agreement or of the relevant Act, the Rules and the Guidelines.

IT IS FURTHER HEREBY AGREED BY AND BETWEEN THE PARTIES AS UNDER:

20) This Agreement is valid from the date of signing of this agreement and for a period of date **05 Year** and can be renewed thereafter on similar or revised terms and conditions as may be mutually agreed upon between the parties.

21) FIRST PART shall use the services of the SECOND PART during the period of this contract to dispose generated hazardous waste at agreed prices, while the agreement is in force. SECOND PART must legally and safely collect, transport, treat, dispose hazardous waste from FIRST PART during the agreed period per rates agreed while the agreement is in force and payments made as per agreement terms.

22) If all the terms and conditions as per the clauses of this Agreement are adhered to by FIRST PART, it will be SECOND PART's responsibility to lift, transport, treat and dispose of the Hazardous Wastes generated by FIRST PART in accordance with prevailing Govt.Rules and FIRST PART shall not have any liability whatsoever in this regard.

23) The main mode of final disposal of HW shall be Incineration/Land-filling and ash would be cemented and landfilled. The modes of disposal are dependent on the Hazardous Wastes' characteristics and FIRST PART shall not have any liability whatsoever in this regard.

24) The User Charges are subject to Annual Revision on the basis of Govt. of India Wholesale Price Index [WPI], (Commodities Index-All India) and once a quarter in the event of escalation of fuel costs and on major price escalations, escalation of fuel costs viz., Power Tariff, change in Disposal Technologies/Method, Wage Hike etc., to name a few. For the purpose of escalation in fuel cost, 30% of freight rate will be considered as fuel element of the cost.

25) SECOND PART reserves the right to cancel this Agreement if FIRST PART fails/refuses to pay the bills/dues as per the payment terms applicable to FIRST PART as mentioned in Annexure. A Notice period of maximum15 (Fifteen) days will be allowed from the date of submission of Invoice. If FIRST PART fails to pay in settlement of the Invoice, FIRST PART shall be liable to pay interest @ 18% per annum and this may also result in cancellation of Membership, forfeiture of Deposit, and termination of this Agreement. Repeated defaults and violation of payment terms will also result in forfeiture of Membership and Membership Deposit.

26) Hazardous Wastes that require other alternate destruction technologies shall be handled at SECOND PART's facility. However, the prices for such treatment techniques shall be determined on a case-to-case basis on their characteristics.

27) Notwithstanding anything contained herein, neither Part hereto shall be liable for damages or have this Agreement terminated for any delay or default in the performance of such Part hereunder if such delay or default in performance derives from conditions beyond the reasonable control of such Part, including but not limited to, acts of God, fires, floods, extreme drought, riots, work stoppages,

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

For Bharat Oil & Waste Management Ltd.

Director

embargoes, governmental actions or damage to the plant or facility or any cause unavoidable or beyond the control of either part including any arbitrary ruling by the Government prohibiting the handling of the Waste or continuing domestic or international problems such as wars or natural calamities.

28) This Agreement shall be deemed to represent the entire Agreement between the parties hereto regarding the subject matter hereof and shall supersede, cancel and replace all prior agreements or arrangements, if any, in this behalf, signed/entered into by and between the parties hereto.

29) This Agreement is on principal to principal basis and nothing contained herein shall be deemed to constitute a partnership, joint venture or agency by and between the parties hereto.

30) This Agreement may be modified or amended only by writing, duly executed by or on behalf of the parties hereto.

31) Any terms and conditions of this Agreement may be waived at any time by the party that is entitled to the benefit thereof. Such waiver must be in writing and must be executed by an authorized officer of such party. A waiver on one occasion will not be deemed to be a waiver of a similar occasion or any other similar breach or non-fulfillment on a future occasion.

32) If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future laws, such provisions shall be deemed terminable and the remaining parts and provisions of this Agreement shall remain in full force and effect.

33) Either Part shall have the right to terminate the agreement upon giving 30 days written notice to the other part with a reasonable cause.

34) It is clearly and expressly understood by and between the parties that the activity of lifting, transportation, treatment, storage and disposal of Hazardous Wastes is an independent contract and it does not come within the purview of the FIRST PART's manufacturing and selling activities. It is also clearly understood and confirmed by and between the parties that this contract is for performance of work and not for supply of Labour.

35) Nothing contained in these terms and conditions shall be construed as creating any relationship either direct or indirect of employer and employee between the FIRST PART and the persons engaged by SECOND PART. The FIRST PART shall have no liability towards such persons and such persons will not have any claim whatsoever against the FIRST PART for salary, wages, provident fund, gratuity, retrenchment compensation or any other compensation for accident or death or any other claim whatsoever.

36) Any dispute arising on any clause or clauses of this Agreement and the contents of the Annexure hereto between FIRST PART and SECOND PART shall be referred to an Arbitrator of repute by SECOND PART. The Arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 with amendments thereof. The arbitration proceedings shall be conducted in English and shall take place at New Delhi, India. The arbitral award, including interim awards, if any, shall be final and binding upon both parties.

37) Subject to the provisions of the foregoing clause, FIRST PART and SECOND PART mutually agree that the courts of Delhi alone, to the exclusion of any other, shall have the jurisdiction.

For Bharat Oil & Waste Management Ltd.

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

Director

38) SECOND PART will lift and dispose waste from FIRST PART only if FIRST PART has valid & active legal authorization/consent to generate waste and operate the specified unit by relevant SPCB. First Part states that it is authorized to generate Hazardous Waste vide UPPCB/UEPPCB approval No. ..... Dated.....valid till.....(copy attached), and has valid unexpired Consent to Operate under Air/Water Act No. ..... Dated.....valid till.....(copy attached). The actual operation of collection/ Transportation/Storage/Treatment/Disposal of Hazardous Waste from First Part will start only after receiving the copy of valid approval of Air/Water/HW Consents from First Part. First Part will notify promptly in 30 days to SECOND PART if it has been ordered **closure** by relevant state pollution control board or any court of jurisdiction over it and that during the term of this agreement.

This Agreement is signed on **05/04/2024** at **Dehradun**.

For Himalayan Hospital

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

By its authorized signatory
(Dr. Rajesh Maheshwari)
Company GST No. 05AAAJH0463L1ZC

For Bharat Oil & Waste Management Ltd.

For Bharat Oil & Waste Management Ltd.

Director

By its authorized signatory
(Naresh Manglani)/(Bharat Manglani)

Witnesses:

1. _____
(Girish Uniyal)

2. _____
(Vinay Chaturvedi)

1. _____
(Pushpesh Pathak)

2. _____
(Name & Address)

ANNEXURE

Hazardous Wastes Management

This annexure is in conjunction with agreement signed between **Himalayan Hospital (A Constituent Unit of Swami Rama Himalayan University), Swami Ram Nagar, Doiwala, Jolly Grant, Dehradun-248016** and **Bharat Oil & Waste Management Ltd., Mauza Mukimpur, Roorkee-Laksar Road, Roorkee-247664** on date **05/04/2024.**

Hazardous Waste Category (A):

Used Lube Oil (DG Set/Compressor) (Category 5.1)**: Rs.3,500/-**(Rupees Three Thousand Five Hundred only) per barrel, with container of 210 liter capacity.

a) Used Oil must comply with parameters as per Schedule V Part A of HW Rules, i.e. without water, sludge. BOWML will only pay for fully filled drums of 210 liters capacity. Part filled drums with quantity less than 210 liters will be FOC.
b) GST Extra 18% or as applicable.

Hazardous Waste Category (B):

User Charges: Himalayan Hospital will have to pay the following charges for the Waste Management Services provided by **Bharat Oil & Waste Management Ltd.**

BOWML will bill a minimum of **Rs 20,000/- (Twenty Thousand Rupees Only) (or as per actual based on quantity, if in excess of 1000 Kg.) per quarter**, towards disposal charges. This will be applicable, even if no waste is disposed in the quarter. The disposal charge is for each pickup for total waste lifting up to **1000Kg**. Thereafter the rate would be as quoted below for each waste type disposed.

The invoice will be generated either on the first day of the beginning of financial quarter (for previous quarter) or on the date the waste is collected and disposed to BOWML and due payable in 7 days. Generator agrees to pay the invoice promptly by due date.

Collection, Treatment, Storage and Disposal Charges:

Sr. No.	Type Hazardous Waste	Approx. Generation Frequency/yearly	BOWML Rates in Rs. per Unit
1.	Chemical sludge from waste water treatment Category 35.3 (ETP Sludge)		Rs. 20 per Kg. (Rs. Twenty per Kg.)
2.	Contaminated cotton rags or other cleaning materials Category 33.2		Rs. 20 per Kg. (Rs. Twenty per Kg.)
3.	Date-expired products Category 28.5 (Date-expired Medicines)		Rs. 20 per Kg. (Rs. Twenty per Kg.)
4.	E-Waste		Rs. 20 per Kg. (Rs. Twenty per Kg.)
5.	Wastes or residues containing oil Category 5.2		Rs. 20 per Kg. (Rs. Twenty per Kg.)

Prices are subject to change up to 10 % every year on the time of renewal of your certificate.

For Bharat Oil & Waste Management Ltd.

Director

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

PAYMENT & OTHER TERMS:

a) **For Hazardous Waste Category-A,** Payment shall be made by **Bharat Oil & Waste Management Ltd.** in favor of **Himalayan Hospital**, by Cheque/Demand Draft/ NEFT within 15 days after receive the invoice from date of **Himalayan Hospital** invoice. Failure to make the payment shall attract interest @ 18% per annum starting from 16th day of date of invoice.

b) **For Hazardous Waste Category-B,** Payment shall be made by **Himalayan Hospital** in favor of **Bharat Oil & Waste Management Ltd.** by Cheque/NEFT/RTGS within 15 days after receive the invoice from **Bharat Oil & Waste Management Ltd**. Failure to make the payment shall attract interest @ 18% per annum starting from 16th day of date of Invoice.

c) **Transportation Cost**: Transportation cost shall be paid by **Himalayan Hospital** to BOWML Mauza Mukimpur, Roorkee TSDF. Round-trip (Shared/Pooled basis), per trip charges to **Doiwala, Jolly Grant, Dehradun** for up to **02 MT** waste is **Rs. 5,000/-.** Thereafter for additional MT the transport charges will be Rs. 500/MT. The transport charges are subject to revision if fuel prices are increased or decreased by Government beyond 10% from the price on the date of signing the Annexure-A.

d) **Loading Cost**: Loading cost shall be borne **Himalayan Hospital. Himalayan Hospital** shall provide the forklift free of cost for loading Hazardous Wastes if required. BOWML Labor Charges is **Rs. 1000/-** (for Two Labor) – If BOWML is asked to arrange loading.

e) The above transportation cost is for material of up to 1.1 MT/m3 density. If density is lower than 1.1 MT/m3, the transport cost will be increased on pro-rata basis as the lighter waste material occupies more volume.

f) **Truck Detention Charge:** A maximum of 02 hrs is allowed for lifting, loading & paperwork upon arrival of truck/container at the premises. Beyond that **Rs. 350/-** per hour detention is charged. BOWML will Charge Rs.5000/- (Rupees five thousand) per day if the vehicle is held overnight.

g) TAXES / LEVIES:- All Government / Municipal Taxes / Duties/ Levies/ Octroi / Tolls /GST etc, as applicable from time to time, will be payable by **Himalayan Hospital.**

h) **Additional MoeF Post-Closure Monitoring / Escrow Fund Charge**: In accordance with the MoEF Memorandum No. 23-1/2008-HSMD dated 16th April 2009, an amount equivalent to 5% of the billed than mentioned in the agreement / Annexure-A, **Himalayan Hospital** sends goods which amount of landfillable hazardous (ETP Sludge) waste towards maintaining of Escrow Fund with scheduled bank jointly operated by MoEF and UPPCB for post-closure monitoring of the Hazardous Waste landfill facility is additionally chargeable.

i) As per Rule 8 of the Hazardous & Other Waste (Management, and Transboundary Movement) Rules, 2016, as amended, **Himalayan Hospital** needs to dispose of the Hazardous Waste within **90** days from their unit location failing which agreement can be terminated without any notice.

j) There shall be NO goods / waste sent (or given) by **Himalayan Hospital** to BOWML other than mentioned in this Annexure or mutually agreed & signed between the parties through an Annexure along with MoeF Approved Laboratory Test Reports of each waste type.

k) If **Himalayan Hospital** sends goods which are not lawful, controlled substance, radio-active, bio-medical, explosive and/or not authorized/approved to be accepted by the BOWML (facility

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Swami Ram Nagar, P.O.Jolly Grant
Dehradun-248140

For Bharat Oil & Waste Management Ltd.

Director

operator) by SPCB then the same shall be notified to SPCB and FIRST PART; The waste shall be refused and returned to the FIRST PART at full transport, handling cost payable by FIRST PART to SECOND PART.

l) If **Himalayan Hospital** sends waste / goods which are as agreed upon yet not matching within +- 10% the test analysis report provided by the **Himalayan Hospital** OR If **Himalayan Hospital** sends waste/goods which are Hazardous Waste but NOT as agreed upon Then the BOWML will charge as decided by BOWML and **Himalayan Hospital** agrees to pay immediately upon demand the Laboratory Comprehensive Test Analysis Charge, Transport, Storage, Disposal, Treatment Charge along with any applicable Government Taxes, MoeF Escrow Fee etc. BOWML will notify the **Himalayan Hospital**, CPCB (HW Cell) and SPCB of the Exception. The complete liability, risk and costs of such goods/Wastes shall be on **Himalayan Hospital** and the **Himalayan Hospital** shall be liable to pay all the charges as demanded by the BOWML and **Himalayan Hospital** shall indemnify the BOWML for / during the transport, storage, unloading, treatment, disposal for the said waste.

m) No Cash Transaction will be entertained. However besides cheque, we can accept payments under NEFT/ RTGS route also.

n) **Himalayan Hospital** shall ensure that the above Hazardous Waste must be packed in (Leak-proof packing & proper correct labeling) proper containers as per HW (M&H) Rules so as to prevent any damage/spillage of the material, during transit to BOWML factory at Roorkee. Containers arranged by **Himalayan Hospital** shall be of metallic/HDPE/ gunny Bags. Container's weight will also be added on the total Hazardous Waste and these are not on returnable basis.

o) All statutory documents in accordance with MoEF/CPCB guidelines under The Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016 as amended shall be provided by us at the time of taking delivery of the material from your Plant.

For **Himalayan Hospital**

By its authorized signatory
(Dr. Rajesh Maheshwari)

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)
Jolly Grant
Dehradun-248140

Company GST No. 05AAAJH0463L1ZC

Witnesses:

1._____
(Girish Uniyal)

2._____
(Vinay Chaturvedi)

For **Bharat Oil & Waste Management Ltd.**

For Bharat Oil & Waste Management Ltd.

Director

By its authorized signatory
(Naresh Manglani)/(Bharat Manglani)

1._____
(Pushpesh Pathak)

2._____
(Name & Address)

Bharat Oil & Waste Management Ltd.(kanpur)
Facilities: Gata No-672,Village Kumbhi
NH-2,Kanpur Dehat -290101 (U.P)
E-18,Site-IV,Sahibabad Indl Area,
Ghaziabad,201010 (U.P)
State Code:_09
State Name : Uttar Pradesh, Code : 09
CIN: U11201DL2007PLC160944
E-Mail : sales@bharatoil.com

Receipt Voucher

Dated : **22-May-24**

Particulars	Amount
Account :	
Himalayan Hospital	**1,00,000.00**
Through :	
Kotak Mahindra Bank Limited A/c No 0012095513	
On Account of :	
3) Himalayan Hospital (A Constituent Unit of Swami Rama Himalayan University), Rs. 1,00, 000/-, DD No-105374, DD Date 09/05/2024, SBI Bank, Security deposit	
Amount (in words) :	
INR One Lakh Only	
	₹ 1,00,000.00

Authorised Signatory

Annexure 4

Regd. : 140/2014-15

Anmol Paryavaran Sanrakshan Samiti

(Green Solution for E-Waste Management certified by UEPPCB)

Facility of E-Waste Collection, Storage, Dismantling, Recycling, Refurbishing & Disposal

Regd. Off. : 119, Old Nehru Colony, Dehradun-248001

Works at : Kh. No. 85/2, 87/1, Daulatpur, Hajratpur Urf Budhwasahid Tehsil Roorkee, Distt. Haridwar

Email : apssdoon@gmail.com

Membership Certificate

This is Certify that M/s Himalayan Institute Hospital Trust,

Swami Ramnagar, Jolly Grant, Dehradun, 248016

is a member of ANMOL PARYAVARAN SANRAKSHAN SAMITI with membership No. (20) *dated* 15.11.22

Date 15/11/2022

This Certificate is valid upto 31 March 2026

President

Secretary

IN-UK13703600023521W

Annexure 5

INDIA NON JUDICIAL

सत्यमेव जयते

Government of Uttarakhand

₹100

e-Stamp

Certificate No.	:	**IN-UK13703600023521W**
Certificate Issued Date	:	28-Mar-2024 02:16 PM
Account Reference	:	NONACC (SV)/ uk1305304/ DEHRADUN/ UK-DH
Unique Doc. Reference	:	SUBIN-UKUK130530434149061122232W
Purchased by	:	MEDICAL POLLUTION CONTROL COMMITTEE
Description of Document	:	Article Miscellaneous
Property Description	:	NA
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	NA
Second Party	:	MEDICAL POLLUTION CONTROL COMMITTEE
Stamp Duty Paid By	:	MEDICAL POLLUTION CONTROL COMMITTEE
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

सत्यमेव जयते

At. No...............L.No.-174
RAMESH CHAND
STAMP VENDOR
Court Compound, Dehradun
Mob.: 9634839802

NOTARIAL NOTARIAL

30/5/24

₹100

IN-UK13703600023521W

Please write or type below this line

BIOMEDICAL WASTE MANAGEMENT SERVICES AGREEMENT

BY AND BETWEEN

HIMALAYAN HOSPITAL, JOLLY GRANT, DEHRADUN

(A UNIT OF SWAMI RAMA HIMALAYAN UNIVERSITY)

AND

MEDICAL POLLUTION CONTROL COMMITTEE

Medical Superintendent
Himalayan Hospital
constituent unit of SRHU

Dr. Vishal Singh

Statutory Alert:

This Bio-medical Waste Management Services Agreement (**"Agreement"**) is executed on 25th May 2024 by and between

Swami Rama Himalayan University (SRHU), a University established under section 2(f) of UGC Act, 1956 and enacted vide Uttarakhand State Act for its teaching hospital i.e. "HIMALAYAN HOSPITAL", JOLLY GRANT, DEHRADUN (hereinafter referred to as "FIRST PARTY").

AND

Medical Pollution Control Committee, a Non-Government Organisation incorporated under the laws of India and having it's registered office at H.O. 21, E-Block, Kalpi Road, Panki, Kanpur, Uttar Pradesh 208020 (hereinafter referred to as "**SECOND PARTY**").

The term and expression 'First Party' and 'Second Party' wherever used or occurring in the deed of agreement shall always, unless or by necessary implication and /or being contrary to the subject and context mean and include heirs, successors, Administrators, assignee etc. in their respective offices.

First party and Second party may be here in after individually referred to a "Party" and collectively as "Parties".

WHEREAS,

A. The First party is a University having its 1000 Bed teaching Hospital i.e. 'Himalayan Hospital', which is located at Jolly Grant, Dehradun, Uttarakhand.

B. Second party is engaged in the bio-medical waste management providing requisite services for collection, transportation, reception, storage, treatment & disposal and has requisite experience, competence and ability in providing the said bio-medical waste management services.

C. Second party is duly authorised by the Uttarakhand Environment Protection and Pollution Control Board (now known as Uttarakhand Pollution Control Board) to establish and operate its Common Bio-medical Waste Treatment Facility at Khasra No. 242 & 244, Village Mandawar, Bhagwanpur, Haridwar, Uttarakhand 247167.

D. Second party is in compliance with the Revised Guidelines for Common Bio-medical Waste Treatment facilities, 2016 issued by CPCB and is equipped with double-chambered Incinerator with capacity of 100 kg/hour with automatic Italian burner & PLC based panel; Stand-by Incinerator with capacity of 100kg/hour; Autoclave with capacity of 500 litres/hour; Chemical treatment capacity with capacity 400 kg/hour; Effluent Treatment Plantof 10 kl; 30m Stack with retention time 2 seconds in Secondary Chamber; Mist Eliminator, Activated Carbon Chamber and Venturi-Scrubber to ensure permissible limits of PCDDs (dioxins) & PCDFs (furans) through Online Emission Flue Gas Monitoring System.

   Shredder, Sharp Pit/Encapsulation, Deep Burial Pit for emergency, Secured Land Fill; Storage rooms for treated and untreated bio-medical waste respectively; Disinfectant Tanks; Genset Room, Maintenance Room & Office; Laboratory; Fire Extinguishers, Green Belt etc.

E. The First Party needs services of some experienced Service Provider for management, treatment and disposal of Bio-medical waste generated in its Hospital, for which the Second Party has submitted its proposal.

F. The parties have entered into this agreement for the Term of Validity (as defined hereinafter).

Medical Superintendent
Himalayan Hospital

Dr. Vishal Singh
Medical Pollution Control Committee

NOW THEREFORE, IN CONSIDERATION OF THE COVENANTS HEREIN CONTAINED, IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. **DEFINITIONS:**

1.1. In this agreement, the following terms shall have the following meanings assigned to them here in below

"Applicable Laws" shall mean and include Bio-Medical Waste Management Rules, 2016,Revised Guidelines for Common Bio-Medical Waste Treatment Facilities, 2016; amended 2018 & 2019, The Water Act, 1974, The Air Act, 1981, EP Act, 1986, Statutory guideline for Handling, Treatment and Disposal of Waste Generated During Treatment/ Diagnosis/ Quarantine of COVID-19 Patients, till March 2020 and as amended thereof;

"**Bio-Medical Waste**" shall mean all the waste generated during diagnosis and treatment including all categories covered under the relevant Applicable Laws;

"**Invoice**" shall have the meaning ascribed to such term in Clause 5.3 below;

"Services" shall collectively mean and refer to the gamut of bio-medical waste management to be provided by the Second party and shall include the collection, transportation, reception, storage, treatment and disposal of bio-medical waste;

"Service Charge" shall have the meaning ascribed to such term in Clause. 5.1.

"**Term**" shall have the meaning ascribed to such term in Clause. 6.1.

1.2 **INTERPRETATON**:

1.2.1. The reference to Recitals, Clauses and Schedules are to the recitals, clauses and schedules of this agreement.

1.2.2. Headings are for convenience only and shall not affect the interpretation of the covenants hereof.

1.2.3. Words imposing the singular shall include plural and vice versa and words denoting one gender include the other gender.

2. **APPOINTMNENT OF BIO-MEDICAL WASTE MANAGEMENT SERVICES**

2.1. The Second party shall render its services for management of bio-medical waste generated by the First party.

2.2. The Second party hereby represents that it has valid authorisations, licences, consents and registrations from relevant government authority for providing services in accordance with Applicable Laws.

3. **OBLIGATIONS OF THE FIRST PARTY**

3.1. Ensure compliance of BMWM Rules, 2016 as amended thereof and CPCB guidelines for implementation of BMW Management Rules;

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3.2. Collect and store properly segregated biomedical waste separately in dedicated storage room prior to handing over the same to the Second party.

3.3. Maintain proper records of waste generated from each unit.

3.4. Collect used PPEs such as goggles, face-shield, splash proof apron, Plastic Coverall, Hazmet suit, nitrile gloves into Red polybag.

3.5. Collect used mask (including Triple layer mask, N95 mask etc.), head cover/cap, shoe-cover, disposable linen Gown, non-plastic or semi-plastic coverall in Yellow polybags.

3.6. Ensure pre-treatment of viral transport media, plastic vials, vacutainers, eppendorf tubes, plastic cryovials, pipette tips as per BMWM Rules, 2016 and collect in Red polybag.

3.7. Provide training to their waste handlers about proper segregation of bio-medical waste, infection prevention measures such as Hand hygiene, use of appropriate PPE, etc.

3.8. Ensure the use of bar-coded, non-chlorinated, virgin LLDP polybags with thickness more than 50 microns, which would be supplied by the Second Party.

3.9. Shall make a provision to ensure no secondary handling and pilferage of recyclables.

4. OBLIGATIONS OF THE SECOND PARTY

4.1. Ensure that all the bio-medical waste is collected, stored, treated & disposed in accordance and in compliance with the Applicable Laws.

4.2. Shall ensure regular sanitization of workers involved in handling and collection of biomedical waste.

4.3. Shall maintain proper record for collection, treatment and disposal of the bio-medical waste.

4.4. Provide training to Waste handlers on infection prevention measures, hand hygiene, respiratory etiquettes, social distancing, and use of PPE etc.

4.5. To provide collection of properly segregated bio-medical waste stored in non-chlorinated, virgin LLDP, bar-coded coloured polybags.

4.6. To inform the concerned authority of the First Party in case of unsegregated bio-medical waste is handed over by the First party for transportation, treatment and disposal.

4.7. If and when an accident occurs during collection, transportation, handling or treatment, the Second party shall report the prescribed authorities about the same.

4.8. Supply of Garbage Bags to First Party having Barcode and shall do real-time uploading in the software about quantity and collection of BMW generated in the Hospital.

5. SERVICE CHARGE, PAYMENT TERMS AND CONDITIONS

5.1 For the Services provided under this agreement, the First party shall pay to the Second party **("Service Charge")** at the following rates per month plus 12% GST as per Government norms.

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NO OF BED	DESCRIPTION		RATE
1000	COLLECTION,TRANSPORT,TREATMENT AND DISPOSAL OF BIO MEDICAL WASTE WITH FOLLOWING HANDLING MATERIAL PER MONTH: RED. YELLOW AND BLUE COLOUR BARCODED POLYBAGS -900 KG, SHARP CONTAINERS 10 LTRS – 150 NOS		400000/-

5.2 The Handling material shall be supplied to the First party only on demand by the Second party. The demand order shall be placed in at least 15 days advance for timely delivery by the Second party. The cost of the Garbage bags as mentioned above is supplied by the second party is included in the per month service charge.

5.3 The Second party shall raise an invoice ("**Invoice**") on the First party for the services provided and handling materials supplied by the 7th day of every calendar month and that the First party shall pay within 30 (Thirty) days the date of invoice except advance payment; pay the amounts due under the invoice to the Second party.

5.4 The First Party shall order additional Barcode polybags Red. Yellow and Blue color (if required) to the Second Party in the form of written purchase order at Rs. 220 per Kg plus 18% GST.

5.5 The First party shall pay the amounts due under the invoice for the services and material provided to the Second party through an account payee Cheque or any online modes of payment in favour of the account details mentioned below:

5.6 **For Service invoice:**

Account Name: MEDICAL POLLUTION CONTROL COMMITTEE
Bank Name: Punjab National Bank
Branch Address: I.M.A., Ballupur Road, Dehradun (Uttarakhand)
Account No.: 4086002100004366
IFSC Code: PUNB0408600

5.7 For Materials invoice:

Account Name: MEDICAL POLLUTION CONTROL COMMITTEE

Bank Name: Punjab National Bank

Branch Address: IMA, Ballupur Road, Dehradun (Uttarakhand)

Account No: 4086002100009088

IFSC Code: PUNB0408600

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5.8 Rates are required to be revised after every two years shall be incremented by 7%.

5.9 Second party may discontinue its services in case the First party defaults in payment of the amounts due for a succeeding period of maximum 90 (ninety) days. Thereafter, a charge of 18% interest rate per month would be applicable.

6 TERM OF VALIDITY

6.1 This agreement shall be valid for a period of 04 (Four) year from the Effective Date.

6.2 This Agreement shall come in force from 1st July 2024 and shall be valid up till 30th June-2028 and further Two year extension based on successful completion of the service ("**Term**")

6.3 Any renewal of the Agreement shall be by mutual written agreement and shall be for such additional periods

6.4 This agreement may be terminated (i) by mutual consent of the Parties; or (ii) immediately by a written notice by the First Party in the event the Second Party commits a material breach of the agreement and is unable to rectify it within 15 (fifteen) days after receiving a written notice;

6.5 Any termination under the above clauses shall not affect the rights and obligations of the Parties and the Parties shall be entitled to exercise their rights and be obliged to fulfil their obligations under this agreement which had arisen prior to such termination.

7 GENERAL REPRESENTATIONS AND WARRANTIES

Each Party represents and warrants to the other that:

7.1 It has full power & absolute authority to enter into, execute and deliver this agreement and has all the licenses/approvals/permissions to perform its obligations and the transactions contemplated hereby and, it is duly incorporated and validly registered under the laws of the jurisdiction of its incorporation or organisation.

7.2 The execution and delivery of this agreement and the performance by it of the transactions contemplated hereby have been duly authorised by all necessary corporate or other internal action of such Party.

7.3 The execution, delivery and performance of this agreement does not constitute a breach of any agreement, arrangement or understanding, oral or written, entered into by it with any third party;

7.4 The execution, delivery and performance by it of this agreement does not violate any statute, law, regulation, rule, order, decree, injunction or other restriction of any governmental entity, court or tribunal to which it is subject;

7.5 Each Party warrants to the other that the representations and warranties in this Clause hereof are true and accurate in all respects and do not contain any untrue statement of any fact or omit to state any necessary or material fact.

7.6 Notwithstanding anything to the contrary contained in this agreement, each Party hereby acknowledges and confirms that the performance by the other Party of its obligations under and in accordance with this agreement is interlinked with the due performance of its own duties, obligations and responsibilities under and in accordance with this agreement.

8 INDEMNITY

Medical Superintendent
Himalayan Hospital
(A constituent unit of SRHU)

Dr. Vishal Singh
Medical Pollution Control Committee

Second Party agrees to indemnify and hold harmless the First Party from & against direct and actual losses, reasonable costs including without limitation the reasonable fees, costs of investigation, expenses, claims, damages, penalties and liabilities arising out of any claims, actions or proceedings (collectively, "Losses") which may be incurred, made against or suffered by the First Party, its officers, agents or employees arising directly out of or in connection with or as a consequence of (i) Any act or omission of Second Party & its staff (including any negligence, unlawful conduct or wilful conduct) relating to this agreement or arising as a consequence of performance of this agreement (ii) the non-performance of its obligations under this agreement, (iii) any material breach of any representations, warranties, covenants made by it in this agreement.

9 **FORCE MAJEURE** : Neither party shall in any circumstances whatsoever be liable to the other Party for any delay or failure to fulfil its obligations under this agreement where any such delay or failure is caused in whole or in part by any Act of Terrorism, Biological or Chemical Contamination or to the extent that any such delay or failure arises from any other cause beyond its control, including, without limitation, fire, floods, acts of Nature, acts or regulations of any governmental authority, war, riots.

10 MISCELLANEOUS

10.1 Amendment: This Agreement may not be amended or modified except by an instrument in writing signed by the Parties hereto.

10.2 Neither Party shall be entitled to assign or transfer any of its right or obligations under this Agreement except with prior written consent of the other Party concerned.

10.3 In no event shall First Party be liable for any business expenses, loss of profit or incidental indirect or consequential damages to the Second Party on account of performing services under the present agreement, for any cause.

10.4 That if any provision of this agreement is held to be invalid or unenforceable to any extent, the remainder of this agreement shall not be affected and each provision of this agreement shall be valid and enforceable to the fullest extent permitted by law. Any invalid or unenforceable provision of this agreement shall be replaced with a provision which is valid and enforceable and most nearly reflects the original intent of the unenforceable provision.

10.5 That the second party shall solely liable for injury, disablement or death caused to its worker during the course of performing their duties in the Premise of the First Party under the terms of this Service Agreement. First Party shall not be responsible for any such injury, disablement or death caused to the worker. If any claim or action is made against the First Party by any government authority, any Worker or anyone's legal heir, then Second Party shall pay such claim, fine or penalty. If any amount is paid by the First Party for above stated injury, disablement or death, then First Party shall be entitled to recover the same from the Second Party.

10.6 The Second Party shall get the waste weighed each time the waste is lifted from the premises of the First Party and shall be required to submit the receipt as documentary proof. The receipt shall be submitted, in original, to the office of the Medical Superintendent for verification.

10.7 This agreement is on a Principal to Principal basis and neither Party shall describe itself as an agent, partner, joint-venture partner, employee, or representative of the other Party, or pledge the credit of the other Party in any way or make any representations or give any warranties to any third party which may require the other Party to undertake or be liable for, whether directly or indirectly, any obligation and/or responsibility to any third party or enter into contracts on behalf of the other Party.

Medical Superintendent

Dr. Vishal Singh

10.8 This Agreement constitutes the entire understanding and agreement of the Parties, and save the Service Agreements that are to be entered into in accordance with the terms of this Agreement, any and all prior agreements, understandings, and representations are hereby terminated and cancelled in their entirety and are of no further force and effect.

11 GOVERNING LAW, DISPUTE RESOLUTION AND JURISDICTION

11.1 In the event any dispute arises between the Parties out of or in connection with this Agreement, including the validity thereof, the Parties hereto shall endeavour to settle such disputes amicably in the first instance.

11.2 The attempt to bring about an amicable settlement shall be treated as having failed as soon as one of the Parties hereto, after reasonable attempts, which shall continue for not less than 15 (Fifteen) days, gives a notice to this effect, to the other Party in writing.

11.3 If the dispute or claim is not resolved through such discussions as contemplated in above clause and one Party has served a written notice on the other Party, then such dispute or claim shall be referred at the request in writing of either Party to binding arbitration by a panel of 3 (three) arbitrators ("the Arbitration Board") in accordance with the Arbitration and Conciliation Act, 1996 and any amendments or modifications made thereto. All arbitration proceedings shall be conducted in the English language and the seat and venue of arbitration shall be in Dehradun. The Parties shall be entitled to seek interim relief from the courts of India for which the parties submit to the exclusive jurisdiction of the courts of law in Dehradun. Any award made by the Arbitration Board shall be final and binding on both the Parties.

11.4 This agreement shall be governed by and construed in accordance with the laws of India as applicable from time to time. In the event the Parties are unable to resolve the dispute mutually, the courts in Dehradun shall have exclusive jurisdiction on any matter arising out of this Agreement.

IN WITNESS WHEREOF THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT ON THE DATE HEREIN ABOVE FIRST MENTIONED.

SIGNED AND DELIVERED BY SWAMI RAMA HIMALAYAN UNIVERISITYAS FIRST PARTY

(Stamp &Signature)

Name: Dr. Rajesh Maheshwari

Designation: Medical Superintendent

Witness Name & Signature:

SIGNED AND DELIVERED BY MEDICAL POLLUTION CONTROL COMMITTEE, AS SECOND PARTY

Dr. Vishal Singh
Medical Pollution Control Committee

Dr. Vishal Singh
Medical Pollution Control Committee

(Stamp & Signature)

Dr. Vishal Singh

M.P.C.C., Uttarakhand

Witness Name and Sign:

(Witness-1)

Signature: Praduman

Name: Praduman Singh.

Address: Jolly Grant

(Witness-2)

Signature:

Name:

Address: Kaligaon, Dehradun

ATTESTED
Ashish Mittal
Advocate & Notary
Reg. No. 59(01)/2022
Doiwala, Dehradun (UK)
30/5/24

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MoU") is entered on this date AUGUST 4, 2022 ("the Effective Date") at Dehradun, Uttarakhand, India

BETWEEN

Swami Rama Himalayan University, Swami Ram Nagar, Jolly Grant, Dehradun, Uttarakhand (India)

And

Social Development for Communities (SDC) Foundation, Dehradun, Uttarakhand (India)

MEMORANDUM OF UNDERSTANDING

Swami Rama Himalayan University (SRHU) endeavors to transform lives through holistic approach to education, providing integrated health care services and effective rural development and social outreach programs. SRHU has an outstanding history of community-based activities, running profound public health education programs and committed participation in national health programs. With its various peripheral health centers and collaboration with NGOS & international bodies.

SRHU which expression shall unless repugnant to the context include its successors, representatives and permitted assigns **OF THE FIRST PARTY**.

Social Development for Communities (SDC) Foundation is a Dehradun, Uttarakhand based not for profit engaged in communication, capacity building and community mobilization. Founded in 2017, SDC has been working closely on issues of sustainable development and governance. SDC Foundation has worked with a range of stakeholders – government institutions, private corporations, think-tanks, international development agencies, media and citizen groups.

SDC Foundation which expression shall unless repugnant to the context include its successors, representatives and permitted assigns **OF THE SECOND PARTY**.

*(SRHU and SDC Foundation are hereinafter collectively referred to as **"Parties"** and individually as **"The First Party" and "The Second Party"** respectively.)*

A. SCOPE OF AGREEMENT

This Memorandum of Understanding provides for a flexible and overarching framework for collaboration for research and academic activities between both parties that can be conducted during the period of the agreement.

The scope of activities shall include, but not be limited to, partnering for citizen engagement and public participation initiatives,; organizing knowledge sessions like policy dialogues, seminars, workshops in the domain of environmental conservation, waste management, sustainable development goals, climate change, circular economy, disaster resilience or any other socio-economic-development subject relevant to Uttarakhand and/or the larger Himalayan region; aiding policy formulation process of the government; designing courses etc.

B. AREAS OF COLLABORATION

1- SRHU and SDC Foundation will work in the areas of sustainable development goals (SDG), climate change, waste management, circular economy, sustainable urbanization, rural development and citizen engagement.
2- SRHU and SDC Foundation will work to promote scientific temper and create awareness in Uttarakhand.
3- SRHU and SDC Foundation will undertake social audits on citizen-centric issues. The findings from such audits will be used to aid the policy formulation process in the state of Uttarakhand.
4- SRHU and SDC Foundation will work together towards adoption of technology and building social solutions.
5- SRHU and SDC Foundation will work together on key central schemes like Swachh Survekshan, Smart Cities Mission, Namami Gange and others.
6- SRHU and SDC Foundation are interested in exploring opportunities for joint bidding for Consultancy/Non Consultancy assignments as members of a Consortium and in accordance with the terms and conditions of the bid documents of the respective bidding process. The Parties shall enter into a Joint Bidding Agreement forming a consortium as per need of the bidding process. In case of an award of a Contract, SRHU and SDC Foundation do hereby agree that they shall be jointly and severally responsible for executing the contract.

C. EXCHANGE OF HUMAN RESOURCES

The Parties agree to explore ways of encouraging collaboration between researchers/staff members from the two institutions. Specifically, the two institutions would identify appropriate researchers/faculty members as Principal Investigator(s)/Principal Co-Investigator(s) at their respective ends, and encourage members of their researchers/faculty to undertake short visits for lectures, facilitate research projects at either end, etc. The terms and conditions for each visit or an assignment, including those concerning stipend, travel, and housing, would be worked out between the partner institutions. SRHU campus can also be accessed for research/academic activities as mutually agreed among the parties.

D. TERMS OF AGREEMENT

1. Progress in realizing the terms and conditions referred to herein will be reviewed periodically as mutually agreed. The Memorandum may be amended at any time by mutual consent in writing by both parties.
2. Both parties also reserve the right to terminate this Memorandum by giving three months written notice to the other party.
3. The implementation and/or continuance of programmes or projects established pursuant to this Memorandum prior to the effective date of termination shall not be affected by the termination of this Memorandum.

E. FINANCIAL

There would be no financial commitment on either side as a part of this MOU. However, task specific financial arrangement as per internal policies of both the parties could be considered as per the mutual understanding.

F. INTELLECTUAL PROPERTY AND CONFIDENTIALITY

1. SRHU and SDC agree to respect each other's rights to Intellectual Property (IP). All background IP used or prepared in connection with this MoU shall remain the property of both parties.

2. No Party to this Memorandum shall use the name, logo or any other designation of any of the other Parties without prior written consent.

3. Neither party shall, at any time, disclose to any third party any confidential information of the other party which is acquired in the course of activities under this Memorandum, without the prior consent of the other party in writing.

G. NON-BINDING NATURE OF MEMORANDUM

Nothing in this Memorandum shall be construed as creating any contract, agency or other legal relationship between the parties. This Memorandum is only a non-binding statement of intent to foster genuine and mutually beneficial collaboration in various domains that have been stated above.

H. RESOLUTION OF DISPUTE

Any issues that are not addressed or stipulated in this MoU shall be discussed and resolved through negotiation in good faith and such resolution shall be incorporated as written amendments to this MoU by mutual agreement between both the Parties.

No disputes are foreseen in the implementation of the MoU. Both Parties, however, agree that if any dispute arises between them, efforts will be made to settle the same as amicably as possible. If the dispute still remains unsettled, it will be referred for resolution bilaterally to Registrar SRHU and Founder, SDC Foundation. The decisions so arrived at shall be final and binding on the parties to this MoU.

I. TERMINATION

1. This Memorandum shall come into force immediately upon the signature by parties.

2. The validity of this Memorandum is initially for three years from the date of its execution, and the same can be further extended by mutual agreement, if required.

3. This Memorandum can be terminated by either party by giving advance notice of three months without jeopardizing any work or collaboration between both the parties.

IN WITNESS WHEREOF, this Memorandum is executed by the parties hereto on the date of signing the Memorandum by the two parties.

Signed by

Swami Rama Himalayan University Registrar

Dr. Susheela Sharma
Registrar
SRHU

Dated: 4th August 2022
Place: Dehradun

Witnesses:

(GIRISH UNIYAL)
S/O Sh R.K. Uniyal
B-11/6 SRHU
Jolly grant, D.Dn.
8194009603, 9412997364

Signed by

For Social Development Communities Foundation
Authorized Signatory

Shri. Anoop Nautiyal
Founder
SDC Foundation

Dated: August 4, 2022
Place: Dehradun, Uttarakhand.

Witnesses: Praveen Upreti

Puran Chandra Upreti
35a Upasana Enclave
Panditwari Dehradun
7500882959

Social Development
for Communities
Foundation Society

July 9, 2024

To Whom It May Concern

This is to confirm that we have received the following quantities of plastic waste from Swami Rama Himalayan University, Jolly Grant, Dehradun.

Academic Year 2023 - 2024 = 1800 Kilogram (Rounded off)

As you are aware, we have a long standing MoU with CSIR-IIP as their Social Technology Partners for the plastic to diesel lab project. We have similar collaborations with Dehradun Cantonment Board and another authorized plastic waste recycler. All plastic collected from SRHU is sent for recycling purposes on a free of cost basis.

Anoop Nautiyal
Founder
Social Development for Communities Foundation

contactsdcuk@gmail.com
www.sdcuk.in

69, Vasant Vihar,
Dehra Dun - 248 006,
Uttarakhand, India

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (649)/22–23
दिनांकः जून 14, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय
मेन हॉस्पिटल भवन (Main Hospital Building)
स्वामी राम नगर जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 57080622 दिनांक 04.06.2022 के सम्बन्ध में।

आपके **मेन हॉस्पिटल भवन** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **09–06–2022** में आपके **मेन हॉस्पिटल भवन** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **09–06–2022** के आधार पर आपके **मेन हॉस्पिटल भवन** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 14 –06–2022 से 13 –06–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(अरु० एस० खाती) 14/06/22
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (572)/22–23 दिनांकः मई 24, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय (Swami Ram Himalayan University)
लैब बिल्ड़िग (Lab Building)
स्वामी राम नगर, जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 90151233 दिनांक 12.05.2022 के सम्बन्ध में।

आपके **लैब बिल्ड़िग** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **16–05–2022** में आपके **लैब बिल्ड़िग** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **16–05–2022** के आधार पर आपके **लैब बिल्ड़िग** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 24 –05–2022 से 23 –05–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर० एस० खाती)
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (570)/22–23 दिनांकः मई 24, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय (Swami Ram Himalayan University)
एक्टिविटी सेन्टर (Activity Center)
स्वामी राम नगर, जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 90606527 दिनांक 12.05.2022 के सम्बन्ध में।

आपके **एक्टिविटी सेन्टर** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **16–05–2022** में आपके **एक्टिविटी सेन्टर** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **16–05–2022** के आधार पर आपके **एक्टिविटी सेन्टर** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 24 –05–2022 से 23 –05–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर0 एस0 खाती)
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (651)/22–23 दिनांकः जून 14, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय
C.R.I. (Cancer Research Institute)
स्वामी राम नगर जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 94571485 दिनांक 04.06.2022 के सम्बन्ध में।

आपके **हॉस्पिटल भवन** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **09–06–2022** में आपके **हॉस्पिटल भवन** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **09–06–2022** के आधार पर आपके **हॉस्पिटल भवन** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 14 –06–2022 से 13 –06–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर0 एस0 खाती) 14/06/22
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्रांक: न–20/असुव्य (652)/22–23 दिनांक: जून 14, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय
इंजीनियरिंग कॉलेज (Engineering College)
स्वामी राम नगर जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 16539094 दिनांक 04.06.2022 के सम्बन्ध में।

आपके **इंजीनियरिंग कॉलेज** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **09–06–2022** में आपके **इंजीनियरिंग कॉलेज** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **09–06–2022** के आधार पर आपके **इंजीनियरिंग कॉलेज** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 14 –06–2022 से 13 –06–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर0 एस0 खाती)
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (650)/22–23 दिनांकः जून 14, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय
Hospital Extension (North)
स्वामी राम नगर जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 17435381 दिनांक 04.06.2022 के सम्बन्ध में।

आपके **हॉस्पिटल भवन** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **09–06–2022** में आपके **हॉस्पिटल भवन** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **09–06–2022** के आधार पर आपके **हॉस्पिटल भवन** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 14 –06–2022 से 13 –06–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर0 एस0 खाती)
14/06/22
मुख्य अग्निशमन अधिकारी
देहरादून।

कार्यालय मुख्य अग्निशमन अधिकारी, जनपद देहरादून।
ईमेल–cfoddn.ukfs@gmail.com

पत्रांकः न–10/हॉ0भ0मा0–D-PE-110-2023 दिनांकः जुलाई 21, 2023

सेवा में,

सचिव
मसूरी देहरादून विकास प्राधिकरण
जनपद–देहरादून।

विषय आपके पत्र संख्या– MDDA/NC/AA/0003/22-23 व मानचित्र संख्या–MAO/MDDA/NC/AA/0004/22-23 दिनांक 08.02.2023 के अन्तर्गत Additional Hospital Building (South Extension) Kh. No/Plot No-1867 (MIN), 1868, 1869, 1908, 1909, 1910, 1911, 1912, SWAMI RAM NAGAR, MAUZA-JOLLY GRANT, PARGANA-PARWADOON, TEHSIL-DOIWALA, जनपद देहरादून में कुल प्लॉट क्षेत्रफल 23968 वर्गमीटर में हॉस्पिटल भवन के मानचित्र स्वीकृत करने हेतु अनापत्ति/आपत्ति के प्रेषण बावत।

महोदय,

कृपया आप अपने पत्र संख्या– MDDA/NC/AA/0003/22-23 व मानचित्र संख्या–MAO/MDDA/NC/AA/0004/22-23 दिनांक 08.02.2023 के अन्तर्गत Additional Hospital Building (South Extension) Kh. No/Plot No-1867 (MIN), 1868, 1869, 1908, 1909, 1910, 1911, 1912, SWAMI RAM NAGAR, MAUZA-JOLLY GRANT, PARGANA-PARWADOON, TEHSIL-DOIWALA, जनपद देहरादून में कुल प्लॉट क्षेत्रफल 23,968 वर्गमीटर में हॉस्पिटल भवन के निर्माण सम्बन्धी मानचित्र संलग्न करते हुए आपत्ति/अनापत्ति प्रमाण पत्र निर्गत किये जाने के सम्बन्ध में आख्या उपलब्ध कराये जाने की अपेक्षा की गई है।

उपरोक्त सम्बन्ध में अवगत कराना है कि प्रस्तावित स्थल का प्रभारी/अग्निशमन अधिकारी ऋषिकेश द्वारा निरीक्षण कराया गया। प्रभारी/अग्निशमन अधिकारी ऋषिकेश की निरीक्षण की निरीक्षण रिपोर्ट–अ0सु0व्य0(आर)/2023–PE दिनांक 18.07.2023 के अनुसार प्रस्तावित स्थल में हॉस्पिटल भवन प्रस्तावित है। जिसका कुल प्लॉट एरिया–23,968 वर्गमीटर है व कवर्ड एरिया–10,635 वर्गमीटर है। जिसका सैट बैक अग्र भाग–18 मीटर, पृष्ठ सैट बैक–06 मीटर, साईड सैट बैक (1)–06 मीटर, साईड सैट बैक (2)–06 मीटर, एवं आन्तरिक जीने की न्यूनतम चौड़ाई–02 मीटर तथा कॉरिडोर की न्यूनतम चौड़ाई–2.50 मीटर, जिस तक पर्याप्त पहुँच मार्ग उपलब्ध है। जिस तक पर्याप्त पहुँच मार्ग उपलब्ध है। जिस पर अग्निशमन विभाग के भारी वाहन आसानी से आवागमन कर सकते है। प्रश्नगत स्थल अग्नि सुरक्षा के दृष्टिगत सुरक्षित पाया गया। प्रश्नगत स्थल के ऊपर से कोई विद्युत लाईन नहीं गुजर रही है। आवेदक को निर्देशित किया गया कि प्रश्नगत स्थल पर हॉस्पिटल भवन के निर्माण के समय/निर्माणोपरान्त निम्नांकित अग्निशमन एवं सुरक्षा व्यवस्था की जानी आवश्यक होगी।

1. भवन निर्माण राष्ट्रीय भवन निर्माण संहिता–2005 (सशोधित–2016) पार्ट–3 एवं पार्ट–4 में निहित मानको तथा उत्तराखण्ड भवन निर्माण उपविधि (यथा संशोधित) में निहित मानको के अनुसार कराया जाना अनिवार्य होगा।
2. मानको के अनुसार सैट बैक अग्र भाग–18 मीटर, पृष्ठ सैट बैक–06 मीटर, साईड सैट बैक (1)–06 मीटर, साईड सैट बैक (2)–06 मीटर, रैम्प की न्यूनतम चौड़ाई वन–वे के लिए 4.5 मीटर व टू–वे की स्थिति में 7.2 मीटर तथा रैम्प की ढ़ाल 1:10 छोड़ा जाना आवश्यक होगा।
3. प्रस्तावित भवन में 01 लाख लीटर क्षमता का भूमिगत पानी टैंक तथा 01 अद्द विद्युत पम्प (1620 एल.पी.एम. क्षमता फायर पम्प), 01 अद्द डीजल पम्प (1620 एल.पी.एम. क्षमता फायर पम्प) एवं 01 अद्द जौकी पम्प (180 एल.पी.एम. क्षमता) का प्राविधान किया जाना आवश्यक होगा।
4. प्रस्तावित भवन के टैरेस में 10 हजार लीटर क्षमता के टैरेस टैंक का प्राविधान किया जाना आवश्यक होगा।
5. प्रस्तावित भवन के निश्चित दूरी पर मानकानुसार होजरील, वेट राईजर, यार्ड हाईड्रेन्ट, ऑटोमेटिक स्प्रिंकलर सिस्टम, मैनुवली आपरेटर इलैक्ट्रिोनिक फायर अलार्म सिस्टम तथा ऑटोमेटिक डिटेक्शन एवं अलार्म सिस्टम का प्राविधान किया जाना आवश्यक होगा।
6. भवन के आच्छादित क्षेत्र में मानकानुसार फायर एक्सटिंग्यूशर स्थापित किये जाने आवश्यक होगे।
7. इलैक्ट्रिक पैनल की सुरक्षा हेतु उपर्युक्त क्षमता के सी0ओ0टू0 फायर एक्सटिंग्यूशर का प्राविधान किया जाए।
8. सुझाये गये समस्त उपकरण/यंत्र भारतीय मानक द्वारा प्रमाणित होने चाहिए।

अतः उपरोक्त अग्नि सुरक्षा व्यवस्थाओं/शर्तो एंव उपनिदेशक (तकनीकी) उत्तराखण्ड अग्निशमन एंव आपात सेवा उत्तराखण्ड़ देहरादून महोदय के ऑनलाईन अनुमोदनोपरान्त दिनांकित 19.07.2023 तथा प्रभारी/अग्निशमन अधिकारी ऋषिकेश की संस्तुति के आधार पर प्रस्तावित हॉस्पिटल भवन के निर्माण हेतु अग्निसुरक्षा दृष्टिकोण से स्थल का मानचित्र अनुमोदन किया जाता है Pre-Establishment की संस्तुति की जाती है।

अतः आख्या संस्तुति सहित सादर सेवा में प्रेषित है।

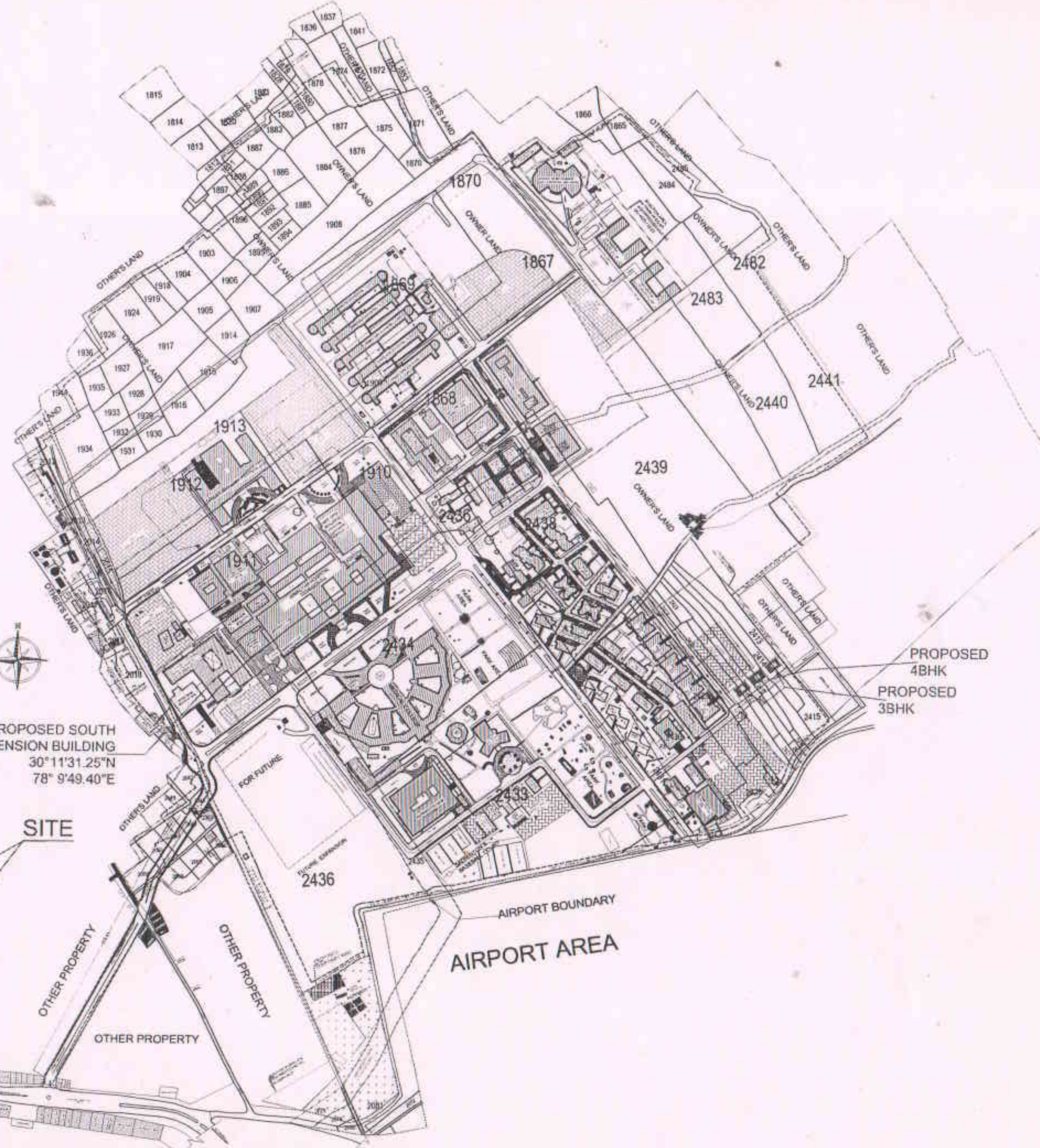
(वी0 बी0 यादव)
मुख्य अग्निशमन अधिकारी
देहरादून।

AREA STATEMENT SHEET

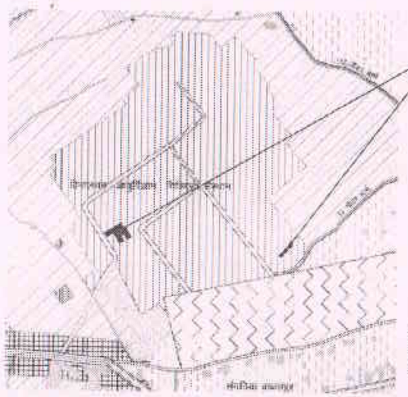
SR.NO.		SQ.MT.
A.	**PLOT AREA AS/SITE (EXTRA LAND AREA DETAILS)**	798722.17
B. (I)	(AREA FOR APPROACH ROAD AND UN-DEVELOPED AREA)	18015.00
(II)	AS/ SAJARA MAP EXISTING ROAD & EXISTING GULL AREA	39850.17
	NET PLOT AREA AS/SITE (A-B)	740857.00
C	**NET PLOT AREA (AS PER DOCUMENTS)**	740857.00
D	APPROVED AREA (DEVELOPED) = (398323.58 + 27644.74)	423968.32
	ADD NEW APPROVED AREA	14346.08
	TOTAL APPROVED AREA (DEVELOPED)	436334.4
E	AREA FOR APPROVAL (UNDEVELOPED)	302522.60
F	EXISTING/PROPOSED GROUND COVERAGE = (30384.46 + 29917.93 + 16938.87) = 77241.26 / 740857 X 100	10.43%
G	EXISTING / PROPOSED (F.A.R.) = (112517.77 + 87744 + 44558.47) = 244820.24 / 740857 =	0.33

AS/SANCTIONED & PROPOSED PARKING ZONE WISE :-

SR.NO.	REQUIRED PARKING	E.C.S.
a)	HOSPITAL, ACADEMIC & RESIDENTIAL ZONE TOTAL COVERED AREA = 244820.24 X 1.5/100	3672.30
	TOTAL E.C.S.	3672.30
	TOTAL PARKING AREA = 3672.30 X 23 = 84,462.90 SQ.MT.	
	PROVIDED PARKING	
(i)	PARKING (P1 TO P21) AREA = (4846.6+9453.88+1454.2+4572.05+1846.75+14521.62+13080.72+7368.48+3263.86+2186.92+1627.24+3075.61+3259+2586.70+744.84+702.98+1350.57+1614.65+6373.72+3845+1377.12) = 80129.09/23	3483.87
(ii)	PROPOSED HOSPITAL BUILDING (SOUTH EXTENSION) = B-01 + B-02 = 4451.54 + 4451.54 = 8903.08/32	278.22
	TOTAL E.C.S.	3762.09
	TOTAL AREA = 80129.09 + 8903.08 = 89032.17 SQ.MT.	



SITE WITH SUPERIMPOSED SAJARA PLAN (N.T.S.)



LOCATION IN MASTER PLAN N.T.S.
30°11'31.25"N , 78° 9'49.40"E

OFFICE USE
सैद्धान्तिक अनुमोदन
2/1/18
मुख्य अभियन्ता/सम्पत्ति अधिकारी
देहरादून

FOR M.D.D.A. USE

EXISTING SANCTION, / PROPOSED/ ADDITION & ALTERNATION HOSPITAL BUILDING MAP FOR HIMALAYAN INSTITUTE HOSPITAL TRUST (FOR **SWAMI RAMA HIMALAYAN UNIVERSITY**), THROUGH ITS SIGNING AUTHORITY DEPUTY GENERAL MANAGER SHRI RAJ PAL SINGH RAWAT.

PART OF LAND KHATA KHATONI NO. 3122, 3117, 2353, 3317, 00234,02040,3118 A
ND KHASRA NO. 1852,1885 kha,1934 kha,2370 kha,1902 kha,1914,1944 min.,
1915,1916,1928,1929,1930,1931,1932,1933, 1887,1815 min., 1814 min., 1813,1820,1934 k,1950 kha,2012,2063 kha,2065 kha, 2436 ga,2050 min.,2436 ga,2050 min.,1904 kha,1907 k,2385 min.,2388 min.,2436 gh. 926,2054 k,2439 g,1867 g,2484 min.,1919,1924,1882,1923 k,1923 kha,1903,1905,1904 k,1907 kha,1836 min.,1837 min., 1893,1894,2422 min., 2423, 2424, 2425, 2426, 2002, 2016, 2017,752 min., 763 min., 2069 min., 2436 g min.,1867 kha min.,1997 min., 1741, 1742, 1743, 1776, 1791, 1821, 1877,1908 k,1850,1864 g, 1867 k,1868 k,1869 k, 1870, 1871, 1872, 1873,1874,1875,1876,1895,1902 k,1906 k,1907 g,1908 kha,1909 k,1910 k,1911 k, 1912, 1913 k, 1917 1926, 1927, 1935, 1936, 2013, 2015,2018 kha,2042,2044 k, 2047, 2048, 2049, 2062, 2073, 2075, 2079,2082 kha,2096,2097,2373,2374,2375,2376 k,2377,2411 k,2413,2414,2415 k,2416,2417 k,2418,2419,2420,2427,2428 k,2429,2436 k,2431,2432,2433 ka,2433 kha, 2434 k,2434 kha,2435 ka,2435 kha, 2430 k,2436 da,2437 k,2437 kha,2438,2439 kha,2440 kha,2441,2445 kha,2479 k,2481 k,2482,2483 g,2513,2441/4297,2663 k,2844 ka,1744,1745,1746,1747,1748,1749,1750,1752,1753,1755, 1764,1766,1767,1768,1828,1879,1880,1881,2483,2449,3059, 2446,2443,2444,2378,2379 ka min.,2407 min.,2408,2442,2371 min.,2485 ka min., 2486 ka min.
(TOTAL LAND AREA = 74.0857 HECTARE)

AT SWAMI RAM NAGAR MAUZA JOLLY GRANT, PARGANA PARWADOON, TEHSIL-DOIWALA, DISTRICT DEHRADUN.

RAIN WATER HARVESTING TANK CALCULATION :-

400 SQ.MT. = 3.50 CU.MT. WATER TANK
400 ABOVE /50 SQ.MT. 0.50 CU.MT. SQ.
TOTAL GROUND FLOOR COVERED AREA - 400 SQ.MT.
= 77241.28 - 400 = 76,841.28/50 = 1536.82 X 0.50 = 768.41 CU.MT.
TOTAL REQUIRED R.W.H.T. = 768.41 + 3.50 = 771.91 CU.MT.

PROVIDED R.W.H.T. 1/3 OF 771.91 = 257.30 CU.MT.

EXISTING 1/3 CAPACITY ON ARRANGEMENT FOR RECHARGE PITBORE WELL R-1 TO R-4 AS PER SANCTION MAP =1424 CU.MT.

TOTAL GROUND FLOOR COVERED AREA = 77,241.28 SQ.MT.
(ALL ZONE'S BLOCK GROUND FLOOR COVERAGE AREA)

TOTAL COVERED AREA FOR F.A.R. = 2,44,820.30 SQ.MT.
(ALL ZONE'S BLOCK COVERED AREA)

SIGN.OF ARCHITECT-

Subhash Chandra Gupta
Authorised Structural Engineer
SIGN.OF STRU.ENGI.

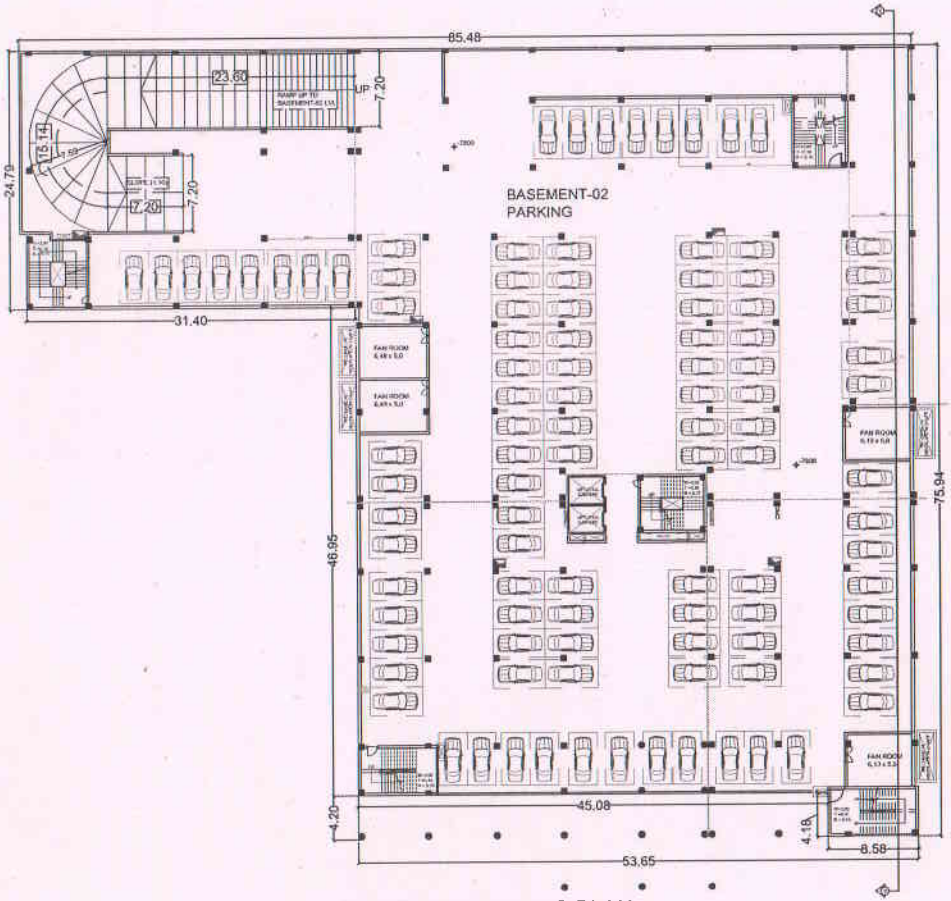
SIGN.OF OWNER-

VAIBHAV ARCHITECTS

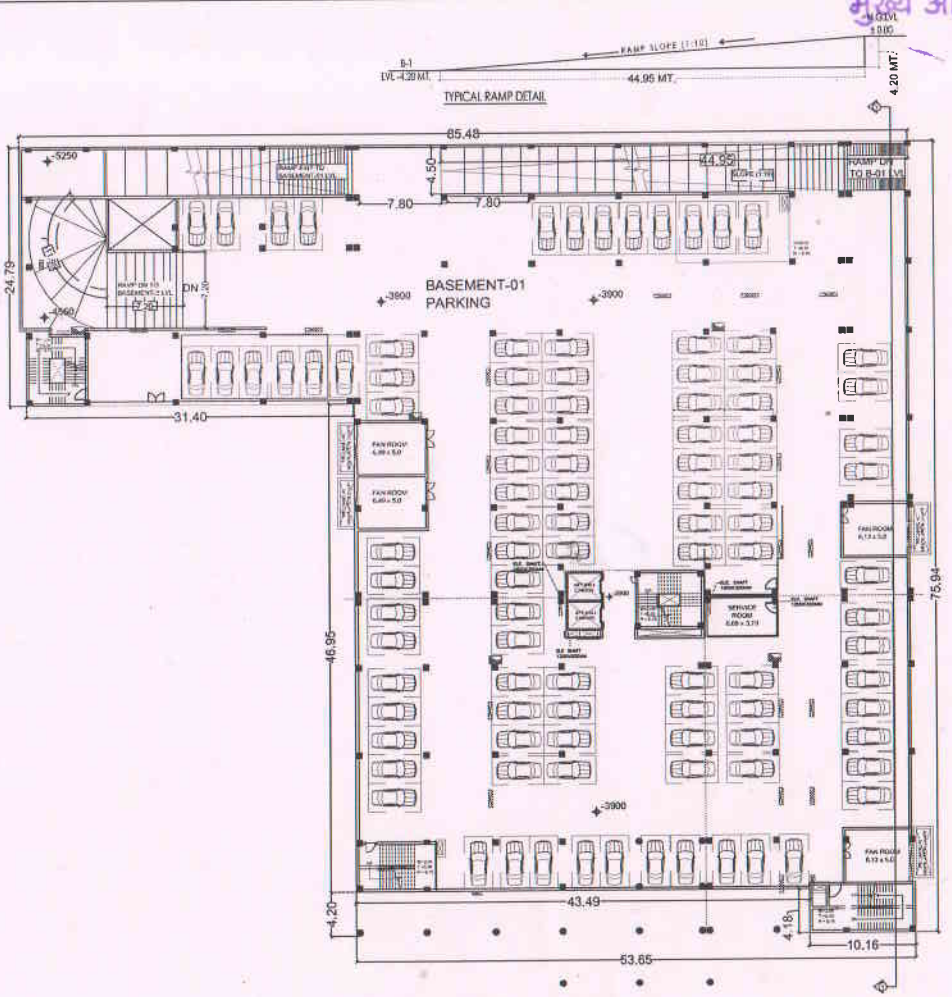
अस्थाई अनुमोदन

मुख्य अग्निशमन अधिकारी
देहरादून

SOUTH EXTENSION BUILDING



BASEMENT-02 FLOOR PLAN



BASEMENT-01 FLOOR PLAN

PROJECT :-

AREA STATEMENT SHEET

NORTH

LEGEND :-

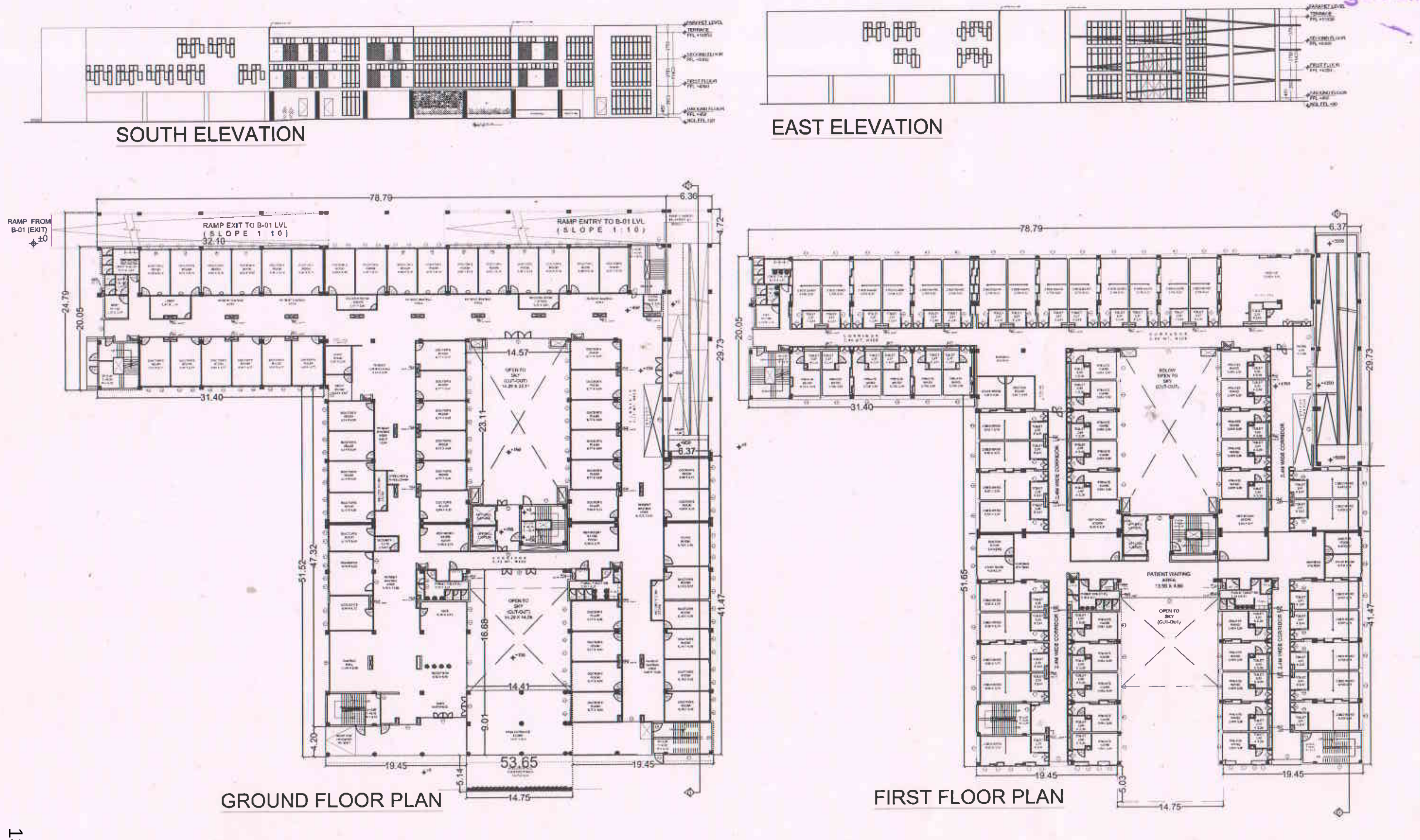
PROPOSED
DEMOLISHED
COMPOUND
EXISTING

SCALE
1 : 100

CERTIFIED THAT :-

VAIBHAV

SOUTH EXTENSION BUILDING



अस्थाई अनुमोदन
OFFICE USE :-
मुख्य अ... अधिकारी
देहरादून

PROJECT :-

EXISTING SANCTION / PROPOSED ADDITION & ALTERATION HOSPITAL BUILDING MAP FOR HIMALAYAN INSTITUTE HOSPITAL TRUST (FOR SWAMI RAMA HIMALAYAN UNIVERSITY) THROUGH ITS SIGNING AUTHORITY DEPUTY GENERAL MANAGER SHRI RAJ PAL SINGH RAWAT.

PART OF LAND KHATA KHATONI NO. ... (TOTAL LAND AREA = ... HECTARE)

AT SWAMI RAM NAGAR MAUZA JOLLY GRANT PARGANA PARWADOON TEHSIL-DOIWALA DISTRICT DEHRADUN

AREA STATEMENT SHEET

NORTH

LEGEND :-
PROPOSED
DEMOLISHED
COMPOUND
EXISTING

SCALE
1:100

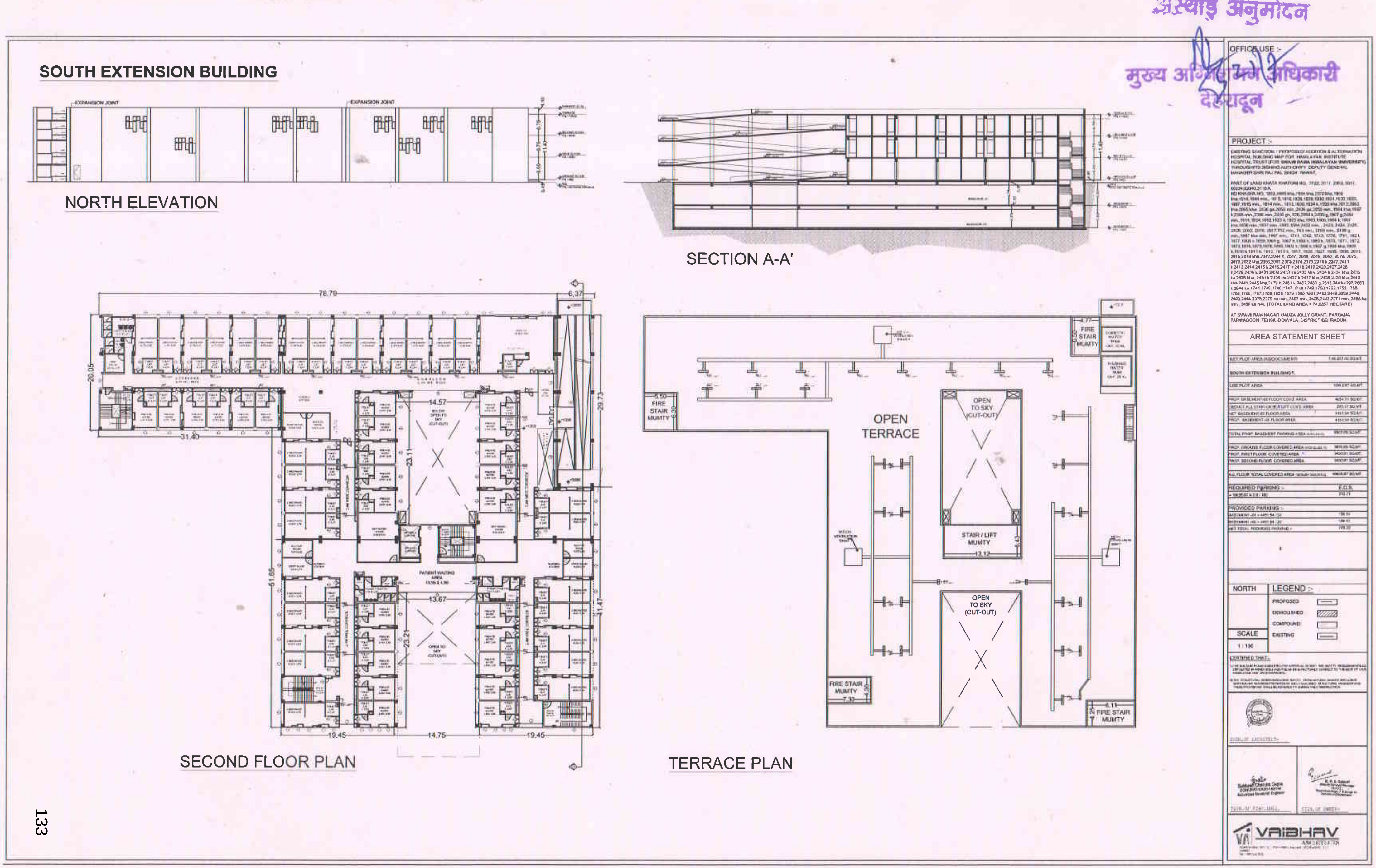
CERTIFIED THAT:-

SIGN. OF ARCHITECT

SIGN. OF STRU. ENGG.

SIGN. OF OWNER

VAIBHAV ARCHITECTS



अस्थाई अनुमोदन
मुख्य अभियन्ता एवं अधिकारी देहरादून
SOUTH EXTENSION BUILDING
EXPANSION JOINT
NORTH ELEVATION
SECTION A-A'
78.79
6.37
20.05
31.40
29.73
14.57
23.11
13.67
23.21
51.65
41.47
19.45
14.75
PATIENT WAITING AREA
OPEN TO SKY (CUT-OUT)
SECOND FLOOR PLAN
FIRE STAIR MUMTY
OPEN TERRACE
STAIR / LIFT MUMTY
13.12
4.77
5.50
6.11
7.30
TERRACE PLAN
OFFICE USE :-
PROJECT :-
AREA STATEMENT SHEET
REQUIRED PARKING :-
E.C.S.
PROVIDED PARKING :-
NORTH
LEGEND :-
PROPOSED
DEMOLISHED
COMPOUND
EXISTING
SCALE
1 / 100
CERTIFIED THAT:-
VAIBHAV

कार्यालय मुख्य अग्नि शमन अधिकारी देहरादून।
पत्राकः न–20/असुव्य (569)/22–23 दिनांकः मई 24, 2022

सेवा में,

स्वामी/प्रबन्धक
स्वामी राम हिमालयन विश्वविद्यालय (Swami Ram Himalayan University)
यूटिलिटी बिल्ड़िग (Utility Building)
स्वामी राम नगर, जौलीग्रान्ट
जनपद–देहरादून।

सन्दर्भः– अग्निशमन एवं आपात सेवा उत्तराखण्ड की वैबसाईट पर उपलब्ध कराये गये यूनिक नम्बर 82777746 दिनांक 12.05.2022 के सम्बन्ध में।

आपके **यूटिलिटी बिल्ड़िग** का निरीक्षण अग्नि सुरक्षा व्यवस्था के दृष्टिकोण से प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** द्वारा किया गया। निरीक्षण आख्या दिनांक **16–05–2022** में आपके **यूटिलिटी बिल्ड़िग** में स्थापित प्राथमिक अग्नि सुरक्षा व्यवस्था को सन्तोषजनक इंगित करते हुये अग्नि सुरक्षा व्यवस्था सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान करने की संस्तुति की है।

अतः प्रभारी/अग्निशमन अधिकारी **ऋषिकेश** की निरीक्षण आख्या दिनांक **16–05–2022** के आधार पर आपके **यूटिलिटी बिल्ड़िग** हेतु उत्तराखण्ड शासन, की अधिसूचना संख्या–342/XX-3/2021-2(39)/2006 देहरादूनः दिनांक 29 नवम्बर, 2021 के अनुपालन में दिनांक 24 –05–2022 से 23 –05–2025 (03 वर्ष) तक के लिये प्राथमिक अग्नि उपकरणों सम्बन्धी कार्यशीलता प्रमाण–पत्र प्रदान किया जाता है। साथ ही उक्त व्यवस्था के कार्यशील होने का स्व–घोषणा प्रमाण पत्र/Audit Report प्रति छः माह में प्रस्तुत/अपलोड़ करना अनिवार्य होगा। यदि उपरोक्त अग्निसुरक्षा अनापत्ति प्रमाण पत्र से सम्बन्धित भवन या अधिभोग के आकार, प्रकृति, प्रयोजन या स्थान में किसी प्रकार का कोई परिवर्तन किया जाता है, तो अग्नि सुरक्षा प्रमाण पत्र नये सिरे से लिया जाना अनिवार्य होगा। अग्निशमन अधिकारी द्वारा दिये गये निर्देशों का पालन करेंगें एंव अग्नि सुरक्षा व्यवस्थाओं को सदैव उच्च स्तर पर रखेंगें। यह प्रमाण पत्र अवैध निर्माण को वैध करने के लिए मान्य नही होगा। अग्निशमन व्यवस्था के सुदृढ न पाये जाने अथवा अकार्यशील दशा में पाये जाने पर यह प्रमाण पत्र स्वतः ही निरस्त समझा जायेगा।

(आर0 एस0 खाती) 24/05/22
मुख्य अग्निशमन अधिकारी
देहरादून।