



SILIGURI MAHILA MAHAVIDYALAYA

1 NO. DABGRAM COLONY, SILIGURI, WEST BENGAL - 734006

GREEN AUDIT REPORT 2022-23



Audited By:
Dr. Indranil Ghosh

Certificate of Registration

This is to Certify That
Environmental Management System of

SILIGURI MAHILA MAHAVIDYALAYA

1, NO., DABGRAM, P.O-RABINDRA SARANI, DARJEELING,
SILIGURI - 734006, WEST BENGAL, INDIA.

has been assessed and found to conform to the requirements of

ISO 14001:2015

for the following scope :

PROVIDING EDUCATIONAL SERVICES.

Certificate No : 24MEESX07
Initial Registration Date : 16/05/2024 Issuance Date : 16/05/2024
Date of Expiry : 15/05/2027
1st Surve. Due : 16/04/2025 2nd Surve. Due : 16/04/2026



DIRECTOR

Magnitude Management Services Pvt. Ltd.



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CERTIFICATE

This is to certify that Siliguri Mahila Mahavidyalaya, Siliguri, West Bengal has conducted detailed Environmental Green Audit for 2022-23 Academic year for their campus and submitted necessary data and credentials for scrutiny. The activity and measure carried out by the college and was found satisfactory. The efforts taken by the students, faculty members and the college authority towards Environment and Sustainability is Highly Appreciated and commendable.


Dr Indranil Ghosh

Environmental Auditor

Executive Summary

In accordance with the Environmental policy of SILIGURI MAHILA MAHAVIDYALAYA for 2022-23, the green audit of the college was conducted in May, 2024.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the standard Green Policy adopted by different academic institution and the college itself. 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 College is in compliance with the applicable regulations, policies and standards.

During the initial planning of the audit, an analysis was conducted in order to identify, predict, evaluate and prioritize the parameters associated with the environmental sustainability. The analysis was based upon an examination of the policies, manuals and standards that govern the environmental sustainability, on data analysis, and on the results of preliminary interviews with personnel considered key in the Environmental Management System (EMS) in the campus. The criteria and methods used in the audit were based on the identified impacts. The methodology used included physical inspection of the campus, review of the relevant documentation and interviews.

Acknowledgement

We would like to thank ProfSubrata Debnath, Principal of Siliguri Mahila mMahavidyalaya for his consent to conduct this audit. We would like to sincerely thank all the Departments, students, teaching and non-teaching staff for their kind cooperation with us during this survey.

We would also like to express our special thanks to Prof Sumitra Naha, Coordinator, IQAC for her dedicated and sincere effort to make the report complete.

Assurance

This audit has been conducted in accordance with the *International Standards for the Professional Practice of Auditing*.

In our professional judgment, sufficient and appropriate audit procedures were completed and evidence gathered to support the accuracy of the conclusions reached and contained in this report. The conclusions are based on a comparison of the situations as they existed at the time of the audit with the established criteria.

1.0 Introduction

Green Audit can be defined as a systematic, documented, periodic and objective review by regulated entities of facility operations and practices related to meeting the environmental requirements. The “Green Audit” aims to analyze environmental practices within and outside the college 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 as whole. Through Green Audit, one gets a direction as to how to improve the condition of environment. There are various factors that have determined the growth of carrying out Green Audit.

There is a relationship between Green Audit and Sustainable Development of any organization. The primary need for achieving the sustainable development of any organization is to determine the Green Audit policy, Green Audit Framework, Accurate implementation, and result analysis of it. Strong Green Audit process can help to achieve the sustainability. Green Audit framework helps to achieve the goal set by an organization. Green Audit is linked to Sustainable development process. Green Audit and sustainable development process help to reduce the wastage and associated cost as well as increases the product quality.

Green audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India which declares the institutions as Grade A, B or C according to the scores assigned during the accreditation.

1.1 About the College

Siliguri Mahila Mahavidyalaya, affiliated to the University of North Bengal and recognized by UGC Under Section 2(f) and 12 (B). It is located at 1 No., Dabgram, P.O-Rabindra Sarani, Dist-Darjeeling Siliguri, West Bengal, Pin-734006. The college was established in 1981 to promote the education of the then lower middle class and weaker sections of the surrounding locality. Since then, the College has been serving the society by educating its women population. The college offers 13 (thirteen) programs viz. English, Bengali, History, Political Science, Economics, Education, Geography, Sociology, Sanskrit, Philosophy, Hindi, Nepali and NCC under the Humanities Discipline at the undergraduate level. The college also has two NSS units and One NCC unit continuously engaged in social and community development.

The college is located on a beautiful campus of 2.174 Acre. The campus is located 7.6 km away from the Siliguri town. The nearest Railway Junction New Jalpaiguri is 2.7 km and Bagdogra airport is 19.7 KM away from here respectively. The campus is surrounded by greenery and beautiful Landscapes. The campus is located in the alluvial floodplains south of the outer foothills of the Himalayas. The area is mostly flat, except for low hills in the northern portions. It is a primarily rural area with 62.01% of the

population living in rural areas and a moderate 37.99% living in the urban areas. Tea gardens in the Dooars and Terai regions produce 226 million kg or over a quarter of India's total tea crop. Some tea gardens were identified in the 2011 census as census towns or villages

The main road is around 100 meter away from the college buildings. There are three buildings in the campus. There are two floors in two buildings while one building has single floor. The total built up area is 0.692 acres. No industrial area is located in the 5 km radius of the college campus.

The college has only one shift and starts from 10:00 am and closes at 5:00 pm. Total 1500 (approx.) students are studying in five different under graduate programs.

The college is desirous to adopt the “Green Campus” system for environmental conservation and sustainability. There are three main pillars i.e.

- Zero environmental foot print
- Positive impact on occupational health performance
- 100% graduates demonstrating environmental literacy.

The goal is to reduce CO₂ emission, energy and water use, while creating an atmosphere where students can learn and be healthy. The college administration works on the several factors of “Green Campus” including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

1.2 Objectives of the Study

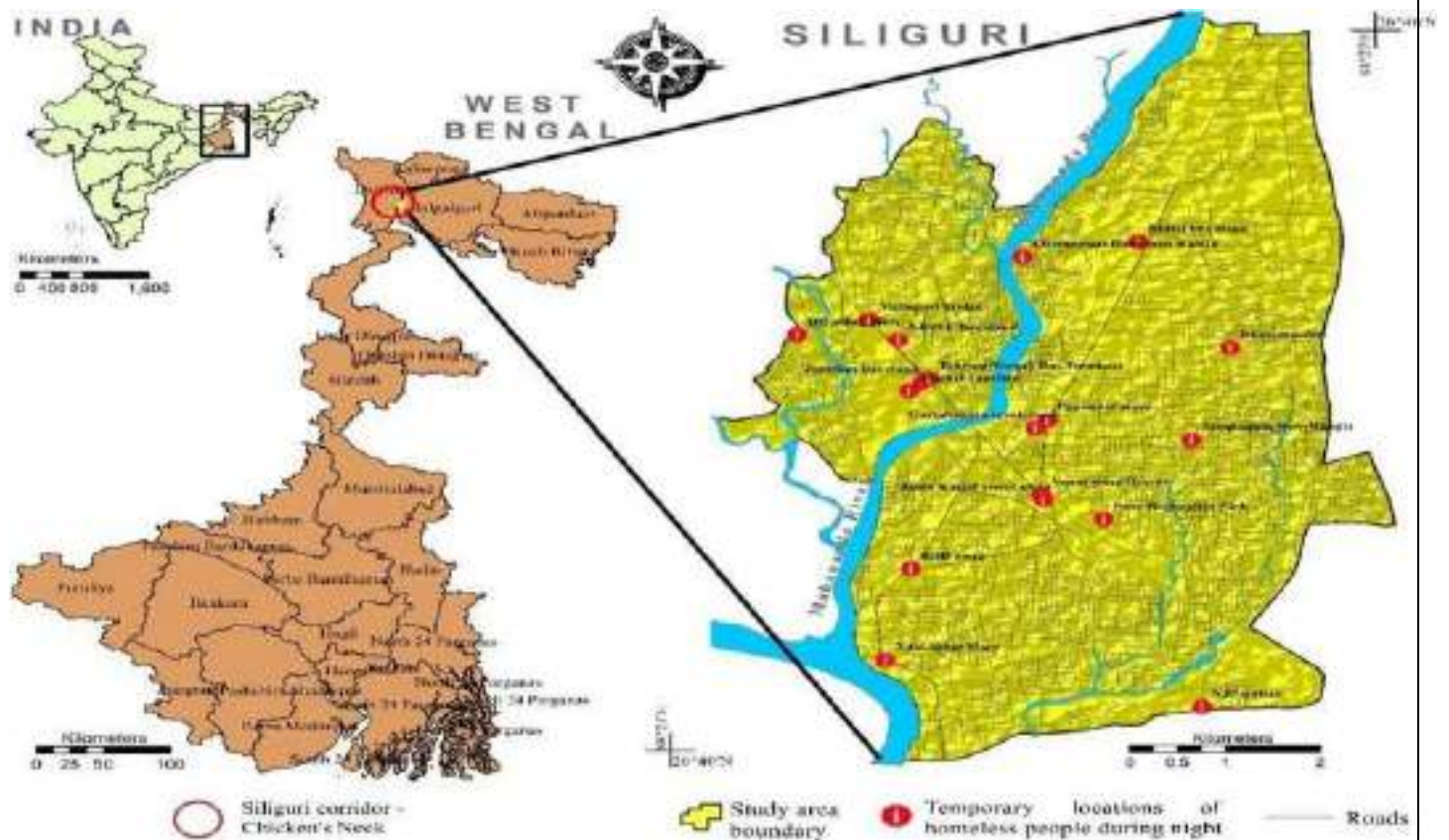
The main objective of the green audit is to promote the Environment Management and conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

1. Verifying compliance: Verifying compliance with standards or best available techniques.
 2. Identifying problems: Detecting any leakage, spills or other such problems with the operations and processes.
 3. Formulating environmental policy: Formulating the organization’s environmental policy if there is no existing policy.
 4. Measuring environmental impact: Measuring the environmental impact of each and every process and operation on the air, water, soil, worker health and safety and society at large.
 5. Measuring performance: Measuring the environmental performance of an organization against best practices.
 6. Confirming environmental management system effectiveness: Giving an indication of the effectiveness of the system and suggestions for improvement.
 7. Providing a database: Providing a database for corrective action and future plans.
 8. Developing the organization’s environmental strategy: Enabling management to develop its environmental strategy for moving towards a greener corporate and performance culture.
 9. Communication: Communicating its environmental performance to its stakeholder’s through reporting which will enhance the image of the organization.
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1.3 General steps of Audit

1. Systematic and comprehensive data collection
2. Documentation with physical evidences
3. Independent periodic evaluation with regulatory requirements and appropriate standards
4. Systematic and comprehensive improvement and management of existing system.





A View of Siliguri/Dabgram



Siliguri Mahila Mahavidyalaya Campus , Siliguri

1.4 The audit process

1.4.1 Pre-audit activities

The pre-audit activities include the following:

1. The sites / area /division that are to be audited need to be determined and selected.
2. The Audit Team was informed on the date of the audit which enabled them to adjust and become used to the concept.
3. The audit scopes were identified. Audit Team was consulted when establishing the scope.
4. The audit plan was designed in such a way that it accommodated changes based on information gathered during the audit and effective use of resources.
5. Audit team and assignment of responsibility were established.
6. The required working papers were collected. This facilitated the investigations of audit team on the sites.
7. The background information on the facility including the facility organization, layout and processes, and the relevant regulations and standards, were collected.
8. The background information on the site's historical uses, and the location of soil and ground water contamination were collected.
9. The pre-audit questionnaire was informed to auditee.

1.4.2 Onsite audit activities

The onsite audit includes:

1. The opening meeting is the first step between the audit team and college authority. In this meeting the purpose of audit, the procedure and the time schedule were discussed.
2. Site inspection is the second step for onsite activity. In this step the audit team discovered matters which are important to the audit but which were not identified at the planning stage.
3. Onsite phase of the audit developed a working understanding of how the facility manages the activities that influence the environment and how any EMS, if there is one, works.
4. Assessed strengths and weaknesses, controls and risks associated with their failure were established.
5. Gathering audit evidence ie, collecting data and information using audit protocol.
6. Communicated with the Audit Team to obtain most information.
7. Evaluated the audit evidence against the objectives established for the audit.
8. An exit meeting to explain the audit findings.

1.5 Methodology

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Water management
- Energy Conservation
- Waste management
- E-waste management
- Green area management
- Green Practices



2.0 Water Audit

Evaluating the facility of raw water intake and determining the facilities for water treatment. Water harvesting is the best technique that can be adopted by simply storing water and using it at the time of scarcity.

2.1 Water Use

This indicator addresses water consumption, water sources, irrigation, storm water, appliances and fixtures. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

2.1.1 Observations

The study observed that surface water is major source of supply of water. Water is used for drinking purpose, toilets, laboratory and gardening. During the survey, no loss of water is observed, neither by any leakages nor by over flow of water from overhead tanks. However, during Monsoon season very less amount of overflow takes place through drains. The data collected from all the departments is examined and verified. On an average the total consumption of water in the college is 4000 lpcd which include domestic purposes, gardening and for other different uses.

The college has Rain water harvesting System in the campus.

2.1.2 Recommendations

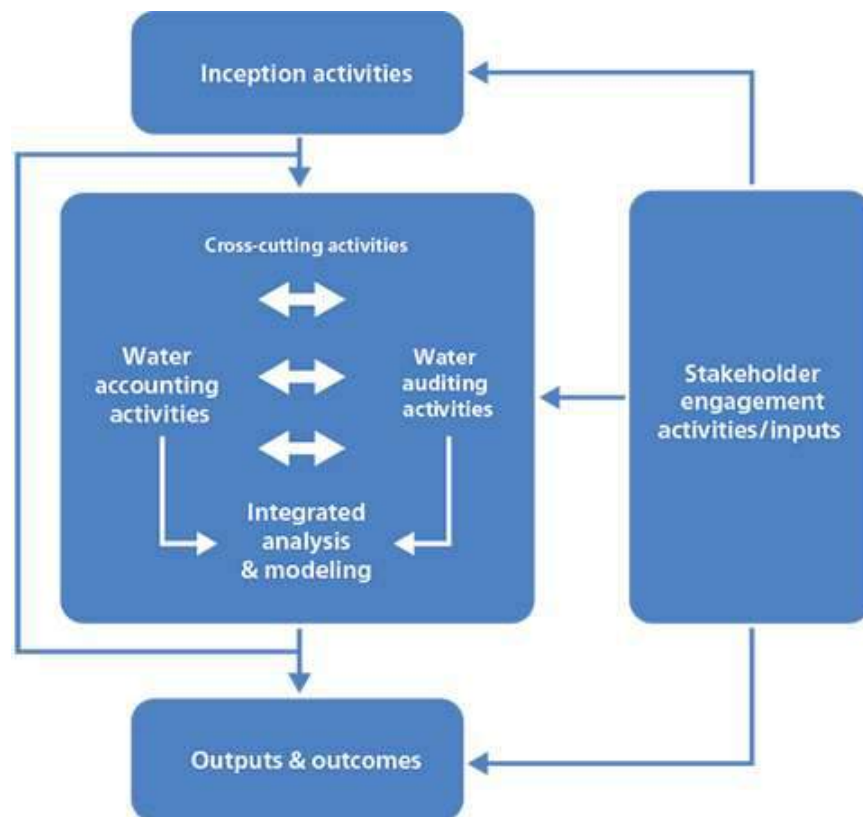
- Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged. In campus small scale/medium scale/large scale reuse and recycle of water system is necessary.
- Minimize wastage of water and use of electricity during water filtration process, if used.
- Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.

2.2 Audit Framework and detailed findings: Water management

Control objective	Control(s)	Audit Observation
Minimize consumption of water.	Repair sources of water leakage, such as dripping taps and showers as quickly as possible.	Regular checking and maintenance of pipelines are done to control water wastage.
	Install appliances which reduce water consumption	Practiced as much as possible.
	Encourage a decrease in water usage among staff, students and conference guests	College does encourage a decrease in water wastage among staff, students and conference guests. The water consumption is minimal.
	Purchase the most efficient washing machines and dishwashers available which have an economy setting as default	These are not required by the college.
	Use an efficient and hygienic water storage mechanism to minimize the loss of water during storage	The college cleans the reservoirs in regular intervals (twice a year) .
	Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration process and ensure that the equipment's used for such usage, are regularly serviced, and the wastage of water is not below the industry average for such equipment's used in similar capacity	The college uses RO to filtrate the water.
	Install Water recycling mechanism, such as rain water harvesting system	The college has Rain water Harvesting system.



Rain water Storage tank



Flow chart of Water Audit

3.0 Energy Audit

It deals with the energy conservation and methods to reduce the consumption and the related pollution.

3.1 Energy Conservation

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

3.1.1 Observations

Total energy consumption is determined as 12372 KWH/Year by major energy consuming equipment. All the departments and common facility centers are equipped with LED lamps. Approximately 56 LED bulbs are counted during survey. The college has one Air conditioning machine. Besides this, photovoltaic cells are also installed in the campus as an alternate renewable source of energy. Solar panels (on grid) of 5KW have been installed in the campus. Equipment like Computers (35 nos with TFT monitors) and printers (07) are used with power saving mode. The college conducts the switch off drills at regular intervals. The switch is shut down after occupancy time and is one of the green practices for energy conservation.

3.1.2 Recommendations

- Support renewable and carbon-neutral electricity options on any energy-purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.
- Appreciate that it is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity.
- Installation of more LED lamps instead of CFL.

3.2 Audit Framework and detailed findings: Energy management

Control objective	Control(s)	Audit Observation
Reduce energy consumption, especially of energy derived from fossil fuels	Support renewable and carbon-neutral electricity options on any energy-purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.	No, the college does not have any choice of renewable and carbon-neutral electricity options on any energy-purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.
	Appreciate that it is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity	The College have no choice other than <i>WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED</i> . The company is a PSU of govt of West Bengal. The company which invests Roof top Solar PV systems.
	Look in to the possibility of on-site micro-generation of renewable electricity.	The College has solar panel street light renewable electricity.
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College is using LED as much as practicable.
	Provide energy efficient heating systems, with adjustable controls for individual heating appliances wherever possible, and ensure that comprehensible instructions are available to staff and students on the use of heating controls.	No Room Heaters are used.

	<p>Encourage staff, students and conference guests to save energy through visible reminders, incentives and information to increase awareness. This particularly concerns turning off electrical appliances when not in use in both communal and residential rooms</p>	<p>Misuse of electricity is controlled by turning off the appliances when not required. Visible reminders are placed above every switch to turn off lights when not in use.</p>
	<p>Monitor and understand the importance of different sources of college energy consumption, and set appropriate and measurable targets for a reduction in certain areas of consumption and/or in the overall consumption of energy.</p>	<p>Disconnect the supply of electricity when not required.(Specially during the month long winter vacation).</p>
	<p>Conduct switch off drills at regular intervals</p>	<p>College conducts switch off drills at regular intervals.</p>
	<p>Ensures that all electronic and electrical equipment's, such as computers, are switched off when not in use, and is generally configured in power saving mode when such option is available</p>	<p>All electronic and electrical equipment are switched off when not in use. Equipment are configured in power saving mode when such option is available.</p>
	<p>If there are equipment's running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment's on standby mode</p>	<p>Equipment running on standby mode.</p>



Installation of Solar PV cell

4.0 Waste Management Audit

This audit addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, rubbish, glass, dust etc. and recycling of them. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair, and reuse. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threat to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus. The different solid wastes collected are as mentioned above.

4.1 Waste Conservation

Good waste management does more than just clean up the environment – it can also provide diverse benefits for communities that engage in waste management activities.

The broader challenge towards the waste management is to develop local/institutional waste management strategies and to embed local processes to ensure sustainability.

4.1.1 Observations

The total solid waste collected in the campus is 16 Kg/day. Waste generation from tree droppings and lawn management is a major solid waste generated in the campus. The waste is segregated at source by providing separate recycle bins for Bio-degradable (Green colored bins) and Plastic waste (Blue colored bins). Single sided used papers reused for writing and printing in offices and all departments. Unimportant and non-confidential reports/ papers are sent for pulping and recycling after completion of their preservation period. Very less plastic waste (0.1Kg/day) is generated by some departments, office, garden etc. Metal waste is stored and given to authorized scrap agents for further processing. Few glass bottles are reused. The college has practice of paperless office work in administration as much as possible and as a result there is less carbon emission from printers, no carbon copy of bills, filing of cartridge outside the office (if necessary) is observed.

Solid waste from canteen like food wastes are stored in bins and later deposited in pits; these wastes and vegetable wastes are collected into pits for making compost. College has two pits measuring 36m³ each, this compost is utilized in college gardens; liquid wastes are disposed carefully through well drainage system.

4.1.2 Recommendations

- Reduce the absolute amount of waste that is produced from college staff offices.
- Make full use of all recycling facilities provided by the Siliguri Municipality Corporation and private suppliers, including glass, cans, plastic bottles, batteries, print cartridges, cardboard and furniture.
- Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated.
- Single sided papers to be used for writing and photocopy.

4.2 Audit Framework and detailed findings: Waste Management

Control objective	Control(s)	Audit Observation
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	Reduce the absolute amount of waste that is produced from college staff offices.	The college has to a certain level controlled the amount of waste that it produces from staff offices.
	Make full use of all recycling facilities provided by Municipality and private suppliers, including glass, cans, plastic bottles, batteries, print cartridge, cardboard and furniture.	Yes. College uses the facilities provided by the local authority to recycle the wastes.
	Compost, or cause to be composted, all organic waste, green waste and un-recycled cardboard produced in or collected from kitchens, gardens, offices and rooms.	College has waste composting facility.
	Recycle or safely dispose of white goods, computers and electrical appliances.	Safe disposal through authorized agents for computers and electrical wastes.
	Use reusable resources and containers and avoid unnecessary packaging where possible	College tries to use reusable resources and avoid unnecessary packaging where possible
	Always purchase recycled resources where these are both suitable and available.	College tries to purchase recycled resources where these are both suitable and available.

Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated	Yes. College has sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated
Make specific arrangements for events, such as cultural Events, internal and external seminars and conferences, where significant recyclable waste is likely to be produced, in order to both minimize the waste produced and maximize what is recycled/reused	Yes! College arranged the events with least production of waste.
Promote reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives	Yes!, the college has promoted reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives
Promote reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives	Yes, the college dispose all waste, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment.
Adoption of paperless office to reduce waste.	Yes! College has implemented paper less office partially.



Solid Waste Management

5.0 E-waste Management Audit

E-waste can be described as electronic equipment that is near or at the end of its useful life. E-waste makes up about 5% of all municipal solid waste worldwide but is much more hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

5.1 E-waste Management System

Electronic waste or e-waste is generated when electronic and electrical equipment become unfit for their originally intended use or have crossed the expiry date. Computers, servers, mainframes, monitors, compact discs (CDs), printers, scanners, copiers, calculators, fax machines, battery cells, cellular phones, transceivers, TVs, iPods, medical apparatus, washing machines, refrigerators, and air conditioners are examples of e-waste (when unfit for use).

E-waste typically consists of metals, plastics, cathode ray tubes (CRTs), printed circuit boards, cables, and so on. Valuable metals such as copper, silver, gold, and platinum could be recovered from e-wastes, if they are scientifically processed. The presence of toxic substances such as liquid crystal, lithium, mercury, nickel, polychlorinated biphenyls (PCBs), selenium, arsenic, barium, brominated flame retardants, cadmium, chrome, cobalt, copper, and lead, makes it very hazardous, if e-waste is dismantled and processed in a crude manner with rudimentary techniques. E-waste poses a huge risk to humans, animals, and the environment. The presence of heavy metals and highly toxic substances such as mercury, lead, beryllium, and cadmium pose a significant threat to the environment even in minute quantities.

Consumers are the key to better management of e-waste. Initiatives such as Extended Producer Responsibility (EPR); Design for Environment (DfE); Reduce, Reuse, Recycle (3Rs), technology platform for linking the market facilitating a circular economy aim to encourage consumers to correctly dispose their e-waste, with increased reuse and recycling rates, and adopt sustainable consumer habits.

5.1.1 Observation

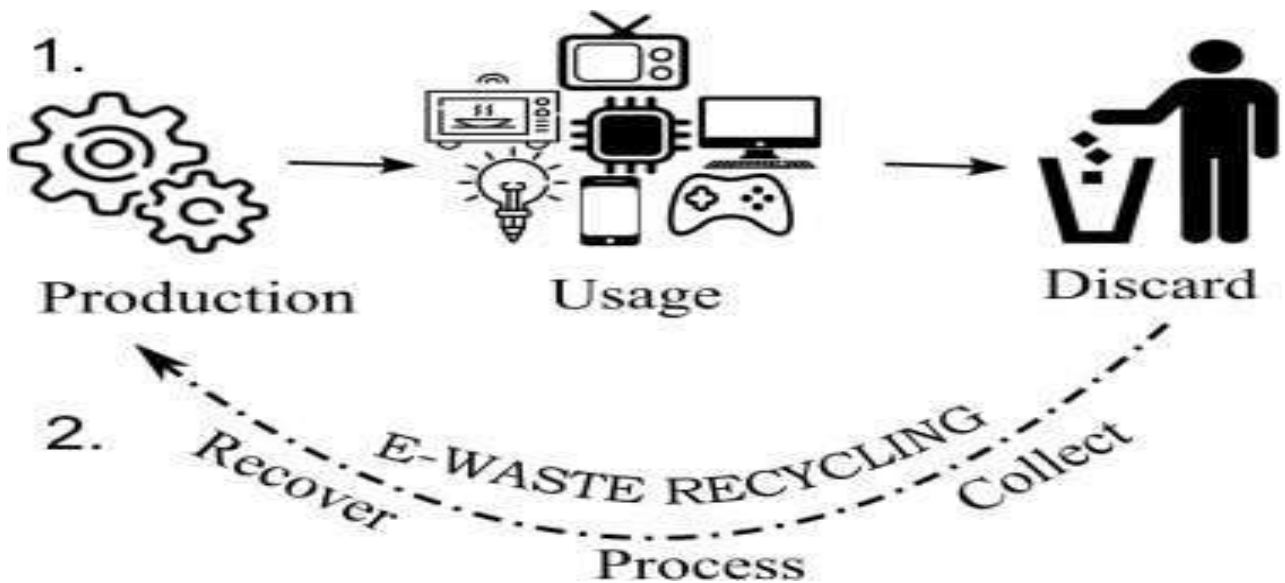
E-waste generated in the college is very less. It is handled, treated and disposed in scientific way. There are 35 computers (with TFT monitors), 09 printers and 01 photo copier are available in the college. The college generates some e-waste like chips, bulbs, circuit boards, mother boards, computers, batteries, relays, and switches. The non-working computers, spare parts and other non-working electrical equipment are stored in separate places. The college has intention to adopt the Buyback policy. E-waste handled is 50 kg (approx) per year and disposed off through authorized vendors.

5.1.2 Recommendations

- Recycle or safely dispose of white goods, computers and electrical appliances.
- Use reusable resources and containers and avoid unnecessary packaging where possible. Always purchase recycled resources where these are both suitable and available.

5.2 Audit Framework and detailed findings: E Waste Management

Control objective	Control(s)	Audit Observation
Reduce the E waste generation	Adoption of Extended Producer Responsibility (EPR), Design for Environment (DfE); Reduce, Reuse, Recycle (3Rs). The EPR is an environment protection strategy that makes the producer responsible for the entire life cycle of the product, especially for take back, recycle and final disposal of the product.	College has no specific policy for E waste management.



6.0 Green area Management Audit

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programs.

6.1 Green Area

Green spaces are important reservoirs of biodiversity, providing resources, ecosystem services and habitats for species of interest, improving functional and structural connectivity at the urban level.

6.1.1 Observations

Total 1.482 acres of land which is available as green area. Campus is located in the vicinity of different types of species of plants. The campus is enriched by different bio diversities like bryophytes, pteridophytes, arthropod, Mollusca and reptiles. Various tree plantation programs are being organized at college campus. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among local people. The plantation program includes various types of indigenous species of ornamental and medicinal wild plant species. There is garden which is maintained by the gardener. The NSS unit of the college and the members of Nature club of the college also look after the college greenery. The college has taxonomically identified all the plants available in the campus.

6.1.2 Recommendations

- Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service.
- Create awareness of environmental sustainability and take action to ensure environmental sustainability.
- Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings.

6.2 Audit Framework and detailed findings: Green Area Management

Control objective	Control(s)	Audit Observation
Development of green area to compensate CO ₂ .	Proper Land use pattern to develop green area.	No. There is no proper land use policy of the college.
	Proper Taxonomical identification of plants in the campus.	The plants inside the campus is identified and marked properly.
	Conduct Environment Awareness program.	Environment Awareness program is regularly organized by the college authority.

6.3 Taxonomical identification of plants in the campus

Sl No	Local Name	Common Name	Scientific Name
1	AAM	Mango	<i>Mangifera indica</i>
2	AAMLOKI	Amla	<i>Phyllanthus emblica</i>
3	ARJUN GACH	Arjuna	<i>Terminalia arjuna</i>
4	BANSH GACH	Bamboo	<i>Bambusa vulgaris</i>
5	BEL	Bengal quince	<i>Aegle marmelos</i>
6	BOT	Banyan	<i>Ficus benghalensis</i>
7	Bougainvillea	Bougainvillea	<i>Bougainvillea glabra</i>
8	CHAP GACH	Champak	<i>Magnolia champaca</i>
9	DEBDARU	Debdaru	<i>Monoon longifolium</i>
10	Dewa	Monkey jack	<i>Artocarpus lacucha Buch</i>
11	GAMHARI	Beechwood	<i>Gmelina arborea</i>
12	GHORA NEEM	Bead tree Persian Neem	<i>Melia azedarach L</i>
13	JAM	Jamun	<i>Syzygium cumini</i>
14	JAMRUL	Water apple	<i>Syzygium samarangense</i>
15	JHAU	Jhao	<i>Tamarix dioica</i>
16	JOBA	China rose	<i>Hibiscus rosa-sinensis L.</i>
17	KAMRANGA	Carambola	<i>Averrhoa carambola</i>
18	KAROBI	Rosebay	<i>Nerium oleander</i>
19	KATHAL GACH	Jackfruit	<i>Artocarpus heterophyllus</i>
20	KOLAboti	Canna lily	<i>Canna indica</i>
21	KOLAGACH	Banana	<i>Musa acuminata</i>
22	LEBU	Lemon	<i>Citrus limon (L.)</i>
23	MEHENDI	Henna	<i>Lawsonia inermis</i>
24	MEHOGONI	Mahogany	<i>Swietenia macrophylla</i>
25	MOHONI GACH	Mohini	<i>Dracaena marginata</i>
26	NEEM GACH	Neem	<i>Azadirachta indica</i>
27	PALASH PHOOL	Parrot tree	<i>Butea monosperma</i>
28	PEYARA	Guava	<i>Psidium guajava L.</i>
29	RADHACHURA	RADHACHURA	<i>Caesalpinia Pulcherrima</i>
30	SEGUN	Teak	<i>Tectona grandis</i>
31	SHIMUL GACH	Silk cotton tree	<i>Bombax ceiba</i>
32	SHIRISH GACH	Shirish	<i>Albizia lebbeck (Linn)</i>
33	SOJNA	Mulberry tree	<i>Moringa oleifera</i>
34	Sthal Padmya	Land Lotus	<i>Nelumbo nucifera</i>

College Garden



College Ground



Green Campus

Green in the campus



Flowers in the campus

Biodiversity in the campus

7.0 Green Practices

"Going **green**" means to pursue knowledge and **practices** that can lead to more environmentally friendly and ecologically responsible decisions and lifestyles, which can help protect the environment and sustain its natural resources for current and future generations.

Green Practice includes

1. **Green purchasing**
2. **Green transportation**
3. **Campaign for Go Green**
4. **Green Policy**

7.1 Green Practice Audit

Control objective	Control(s)	Audit Observation
Ensure that improvements, purchases and developments are environmentally sound	Seek and act upon professional advice in order to minimize the adverse environmental impact of any new developments and exceed government regulatory requirements. This includes efficient heating and water systems, appropriate space for recycling, and the use of recycled and/or sustainable building materials where possible	The college has contacted and acts upon professional advice in order to minimize the adverse environmental impact of any new developments and Government regulatory requirements.
	Purchase efficient and environmentally sound appliances	College is positive about increasing greenery by planting in front of the college and maintaining potted plants scientifically as much as possible.
	Purchase food that has been produced and delivered with minimal impact on the environment, this includes buying locally produced, organic and free range food wherever possible	No, college does not purchase food stuff as the canteen facility is available from 11 am to 4 pm on all working days.

Minimize the use of unsustainable transport	Make available information about bicycle and pedestrian routes, public transport services and car share schemes to staff and students.	The college is well connected with good surface transport. Faculty members, Office staff and students are attending the college by public transport or by own transport like motor cycle etc. A well maintained parking place is available for the two wheelers.
	Reduce the proportion of travel on College business carried out in private transport and eliminate unnecessary and inefficient use of college vehicles	No, college has no vehicle. College uses hired vehicle whenever it is required. Most of the time use Public transport for official works.
	Promote car sharing / car pool among the students and faculty members	Both students and faculty members use either public transport and very less own vehicle.
Minimize the use of chemical pollutants	Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations	Negligible amount of washing liquids are used in the college and all the toilet cleaners are Eco friendly.
	Reduce the practice of burning Plastic and other material that emits harmful gas on burning is prevented in the campus.	The college is plastic free zone.
	Establish a Garden in the campus	The college has already maintained garden of plants are there.
	Minimize the use of fertilizers and pesticides in college grounds, opting for the use of compost produced on site wherever possible.	Negligible amount of fertilizers and pesticides are used in the college.
	Encourage the faculties and students to plant trees in the garden.	Faculty members and students know the importance of the tree plantation.
	Reviews periodically the list of trees planted in the garden.	Such review are conducted on frequent basis.
	Conduct environmental awareness workshops as a part of the program.	The College regularly organizes camps, seminar, and workshops.

Ensure that environmental awareness is created	Conduct events such as plant trees to spread environmental awareness among the students	The different groups of College students usually do that.
	Create awareness of environmental sustainability and takes actions to ensure Environmental sustainability.	Seminars and awareness programmes are conducted on Nature and natural resources, wildlife for the Conservation of Biodiversity.
	Reduce the rate of contributes to the depletion and degradation of natural resources	College does not directly or indirectly involve in depletion and degradation of natural resources.
	Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service	As per UGC guidelines the subject Environmental Studies is introduced in the curriculum of all the streams. Under this curriculum, students have to submit a project report based on the field study and the environmental data they have collected. Students appear for the written test where 60 marks are allotted.
Ensure that the buildings conform to green standards.	Review architecture of existing buildings and reviews ways, in consultation with experts, to reduce usage of energy for such buildings, offering greatest efficiency for energy and water usage, and reducing carbon emission.	The college building is less than 25 years old and follows the standard.
Ensure that the Environmental Policy is enacted, enforced and reviewed	Establish a College Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy.	The college has Environmental Protection Cell which looks after the Environment Protection and Campus Beautification. The cell also regularly monitors and advocates for environment protection measures and development of green area.
	Ensure that on the Nature Club there will be appropriate representatives of the relevant college departments and authorities – such as catering, gardening, maintenance, cleaning and finance	The college has its Environmental Protection Cell comprising the faculty members of different departments.
	Ensure that on the Environmental Committee there will be the Green Officer from an external agency who is engaged in the profession of providing guidance on environmental impact	The college has no such Green Officer.

	Ensure that the Environmental Committee will review the Environmental Policy on an annual basis, and will monitor progress and set measurable targets wherever possible	Environmental Protection Committee reviews the policy periodically.
	Ensure that the Environmental Policy is enforced regardless of whether its requirements exceed the mandate of the law	Environmental policy of the College: "No to water & Electricity misuse; Optimal waste management".
	Require that every staff and student member recognizes their responsibility to ensure that the commitments in the Environmental Policy are properly put into practice	Every staff and student member recognizes their responsibility to ensure their commitments to the Environment.
	Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings	Green audit is conducted annually.

7.1.2 Recommendations

- The Environmental Protection Committee should be empowered to look after all the green practices in the college
- More Seminar/ workshop should be organized to create the awareness of Environmental conservation among the students and other stake holders.



**Four Wheeler
Parking**



**Well
maintained
parking place in
front of
administrative
building**



Activities of Environmental Protection Cell

8.0 Conclusion

Considering the fact that the institution is predominantly an under-graduate college, there is significant concern over the environmental conservation both by faculty and students. The environmental awareness initiatives are substantial. The installation of solar panels and efforts towards paperless work system are noteworthy. Besides, environmental awareness programmes initiated by the administration shows how the campus is going green. Few recommendations are added to curb the menace of waste management using Eco-friendly and scientific techniques. This may lead to a prosperous future in the context of Green Campus and thus sustainable environment and community development.

As part of green audit of the campus, we also carried out the environmental monitoring of campus which includes illumination, Noise level, and Ventilation and Indoor Air quality of the class room. It was observed that illumination and Ventilation is adequate considering natural light and air velocity present. Noise level in the campus is below 50 dB at day time which is well within the limit.



Sustainable Development Goals

Appendix: 1











Device Location	Siliguri WBPCB Office		
Relative Humidity	52.22 %	Temperature	34.181 °C
Latitude	26.7228917	Longitude	88.3901084
		Date and Hour	2024-05-15, 15 hours

Pollutant	Average	Minimum	Maximum
PM 2.5	50.34 $\mu\text{g}/\text{m}^3$	38.13 $\mu\text{g}/\text{m}^3$	67.02 $\mu\text{g}/\text{m}^3$
PM 10	92.91 $\mu\text{g}/\text{m}^3$	66.31 $\mu\text{g}/\text{m}^3$	140.64 $\mu\text{g}/\text{m}^3$
Temperature	30.09 °C	25.38 °C	36.88 °C
Humidity	66.84 %	49.45 %	80.75 %
Wind Direction (°)	N 35°24' W	-	-
Wind Speed (m/s)	0.03	0.00	0.10

Disclaimer: West Bengal pollution Control Board has developed a sensor based air pollution Monitoring network. The sensors are periodically calibrated against the reference-grade monitors and are being used for air quality management for the state. The data represent broad trends of air pollution in the locality. These data are being used for the purpose of research only and not to meant for regulatory intent.

24-Hourly NAAQS	
PM 2.5 ($\mu\text{g}/\text{m}^3$)	PM 10 ($\mu\text{g}/\text{m}^3$)
60	100

Appendix: 2

Current Pollutants	Air-Quality Scale	Over the past hour
PM_{2.5}  Poor	Fine Particulate Matter  are inhalable pollutant particles with a diameter less than 2.5 micrometers that can enter the lungs and bloodstream, resulting in serious health issues. The most severe... more	58 18 µg/m ³
PM₁₀  Fair	Particulate Matter  are inhalable pollutant particles with a diameter less than 10 micrometers. Particles that are larger than 2.5 micrometers can be deposited in airways, resulting in health... more	49 44 µg/m ³
NO₂  Excellent	Breathing in high levels of Nitrogen Dioxide  increases the risk of respiratory problems. Coughing and difficulty breathing are common and more serious health issues such as respiratory... more	19 10 µg/m ³
O₃  Excellent	Ground-level Ozone  can aggravate existing respiratory diseases and also lead to throat irritation, headaches, and chest pain.	18 54 µg/m ³
SO₂  Excellent	Exposure to Sulfur Dioxide can lead to throat and eye irritation and aggravate asthma as well as chronic bronchitis.	7 7 µg/m ³
CO  Excellent	Carbon Monoxide is a colorless and odorless gas and when inhaled at high levels can cause headache, nausea, dizziness, and vomiting. Repeated long-term exposure can lead to heart disease	3 267 µg/m ³

Air Quality Status: Satisfactory

AQI	Remark	Color Code	Possible Health Impacts
0-50	Good		Minimal Impact
51-100	Satisfactory		Minor breathing discomfort to sensitive people
101-200	Moderate		Breathing discomfort to the people with lung heart disease, children and older adults
201-300	Poor		Breathing discomfort to people on prolonged exposure
301-400	Very Poor		Respiratory illness to the people on prolonged exposure
>400	Severe		Respiratory effects even on healthy people

Appendix: 3

Device	Siliguri WBPCB Office	
Zone	Commercial	
District	Darjeeling	
Timestamp	May 15th 2024, 4:47 pm	
Parameter	Value	
LAs	54.17	
LCs	59.29	
LZs	61.87	
LAeqt	54.13	
LCeqt	61.21	
LZeqt	61.21	
LApeakt	79.78	
LCpeakt	83.34	
LZpeakt	87.13	
National Noise Standard		
Noise Limit	DAY (6 AM - 10 PM) in dB(A)	NIGHT (10 PM - 6 AM) in dB(A)
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence	50	40

GREEN POLICY OF SILIGURI MAHILA MAHAVIDYALAYA

About the College:

Siliguri Mahila Mahavidyalaya, affiliated to the University of North Bengal, is the only Girls' College in Siliguri Sub-division. It is located at 1 No., Dabgram, P.O-Rabindra Sarani, Dist-Darjeeling Siliguri, West Bengal, Pin-734006, represented by Dr. Subrata Debnath, Principal of the college. It was established in 1981 to promote the education of the then lower middle class and weaker sections of the surrounding locality. Since then, the College has been serving the society by educating its women population. The college offers 13 (thirteen) programs viz. English, Bengali, History, Political Science, Economics, Education, Geography, Sociology, Sanskrit, Philosophy, Hindi, Nepali and NCC under the Humanities Discipline at the undergraduate level. The college also has two NSS units and one NCC unit continuously engaged in social and community development.

Green Policy:

The Green Campus Policy of the college aims towards a Clean and Green campus where environmental friendly practices and education combine to promote sustainable and eco-friendly practices in the campus and beyond the campus. It also offers the institution an opportunity to redefine its environmental culture through inculcating environmental ethics among the students and staff.

Taking into account the necessity of protecting environment for a sustainable, pollution-free and healthy life on the planet Earth in the coming years, the college has formed its Green Protocol. The college is determined to follow the policy strictly by implementing it. The college also acts to create environmental consciousness among the students, staff and the local community in general on a continuous basis through various related activities within and outside campus. The college is dedicated to create a clean, green and healthy environment in the campus.

Aims:

It aims to create environmental consciousness among the community and acts towards a sustainable, pollution-free and healthy environment, hence to protect our mother earth.

Objectives:

- To **make** the students and the staff aware of minimising the use of polluting products and use environment-friendly products and services.
- To inculcate the importance of cleanliness for a healthy life among the staff, students and the society.
- To create environmental awareness by organizing various activities inside and outside the campus.
- To **make** the trainees, staff, local community and in general the society aware about the proper disposal of wastage and adopt health & environment friendly practices.

Initiatives to implement the Policy:

To implement this policy, the following measures have been taken:

❖ Plantation of Trees and Plants:

The college campus is fully protected by a well-constructed boundary wall on all sides. The college has a large green campus with both big trees and small shrubs which offer a very eye-soothing view to all. The college will encourage the maintain the GREEN of the campus.

❖ Cleaning the campus on regular basis:

All the staff and students **will** participate in the cleaning programme as an inseparable part of Swachh Bharat initiative. Social awareness programmes will be organized every year to spread awareness regarding various environment related contemporary issues.

❖ Observance of “Environment Day”:

Every year the World Environment Day will be **celebrated** to spread the values and importance of environment in our life. Every year plantation initiatives will be taken and saplings will be planted both in the ground and earthen pots.

❖ Motivating the Society to take part in green initiative:

The college will take initiatives to include gifting plants in the felicitation of guests and resource persons as a part of ‘GREEN INITIATIVE’.

❖ **Creating a small space garden of Medicinal Plants:**

One small garden for medicinal plants has been prepared. Some basic medicinal plants e.g. Ocimum sanctum, Aloe vera, Ocimum gratissimum, Andrographis paniculata, Phyllanthus emblica, Curcuma longa, Amomum subulatum, Syzygium aromaticum, Azadirachta indica, Catharanthus roseus etc. are grown here.

❖ **Reducing the use of Plastic and converting the campus as “No Smoking Zone”:**

The entire campus will be a “No smoking zone”. Use of plastic will be drastically minimized.

❖ **Rain Water Harvesting:**

This technology is used to conserve rainwater by collecting, storing, conveying and purifying of rainwater that runs off from rooftops, roads, open grounds, etc. for later use.

❖ **Motivating the Stakeholders to take part in Green Initiatives:**

There is a practice to plant saplings of indigenous trees each year in the college ground. Saplings are gifted to people in the surrounding areas of the college.

❖ **Engaging the Alumnus in green initiatives:**

The alumni of this college have always been involved in all good and positive initiatives undertaken by the college. **Alumni** organize meetings on the theme of environmental awareness.

❖ **Paperless work and communication:**

The college has a policy to minimize the use of paper in all types of official/academic Work and communication through E- Communication. The use of paper is substantially reduced through digitization. One-side blank pages are re-used for rough work to avoid wastage of paper. The faculty members communicate for the required official and college-related academic activities through What's app - Class-wise groups, Department wise groups, Such digitised communication via Committee wise groups and Activity wise groups have reduced the usage of paper in notices and circulars. Moreover, the college has avoided massive usage of paper by introducing the "Virtual Classrooms" wherein references, notes, syllabi, question banks, study material are stored and shared on the e-platform. Some departments have also started accepting E-assignments. The admission procedure has been performed totally online. Examination form fill-up, marks up-loading, etc. are also been performed through online portal. Examinations and classes are also held online in the year of COVID/Lockdown. Library has also been fully automated with the software package KOHA. As a

result paper use has been minimized otherwise required for book processing and circulation process. These practices has been proved highly beneficial to save money, boost productivity, save space, make documentation and information sharing easier, and help the environment.

❖ **To encourage using Bi-cycles in the campus and reducing the use of Diesel-Petrol:**

Students will be encouraged to use bi-cycle instead of diesel-petrol vehicles.

❖ **Environment Consciousness through creative Wall Posters**

Wall posters will be especially dedicated on “Environmental awareness” theme. Every year a few writings are to be taken on the theme students.

❖ **Environment awareness through various activities:**

The college organizes various activities and programs such as street play, rally in the local area, tree plantations, and cultural activities to aware all the stakeholders and the society.

❖ **Solid Waste Management:**

All the Departments, laboratories, and Classrooms will be provided with bins for dry wastage disposal. Segregation of the waste into dry and wet waste will be done through the separately allotted dustbins at strategic locations in the college.

- Landfills: Throwing daily waste /garbage in the landfills are done which eliminates odors and dangers of waste.
- Composting: The remains of the dead plants and kitchen waste from the canteen are turned into nutrients rich food for plants in the form of compost.

Faculty and college students are motivated to segregate plastic from normal waste and dispose of it accordingly. Regular waste management is done by selling off the unwanted material to the local vendors.

❖ **E-waste Management:**

Old batteries, computers and wires will be segregated and sold off at regular intervals. The college repairs the old broken items instead of buying new ones.

❖ **Use of LED Bulbs/Tubes and Power Efficient Equipment:**

We are trying to maximize the use of LED bulbs, tubes and power efficient equipment.

❖ **Solar Plant in the College:**

The college has taken the Initiatives to install solar panel in the college. Inspection has been done, proposal approved and work are in progress.
