

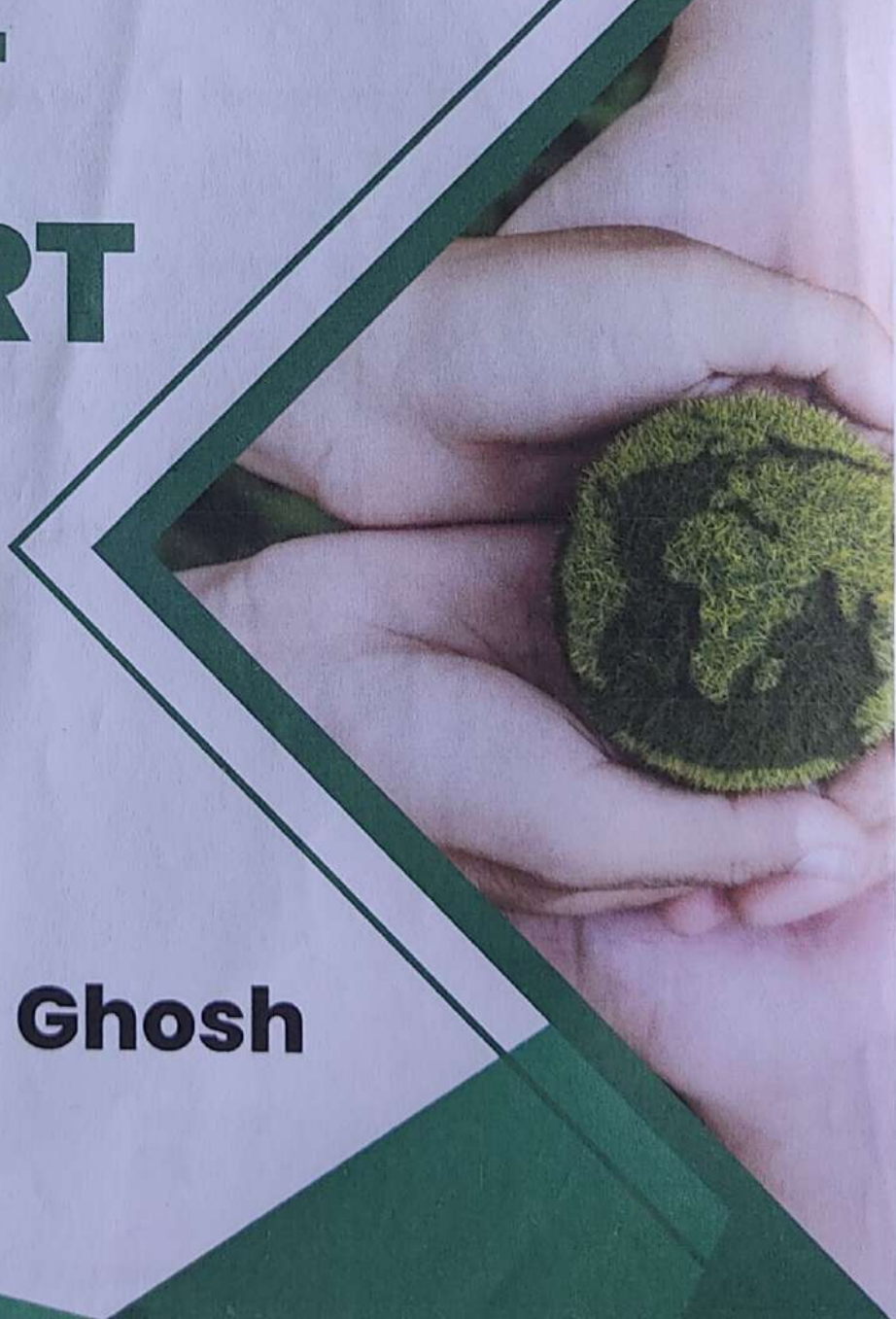


LILABATI MAHAVIDYALAYA

Alinagar Rd, Jateswar, Alipurduar, West Bengal 735216

GREEN AUDIT REPORT

2023-24



Audited By :

Dr. Indranil Ghosh

Certificate of Registration

This is to Certify That
Environmental Management System of

LILABATI MAHAVIDYALAYA

JATESWAR, ALIPURDUAR - 735216, WEST BENGAL, INDIA.

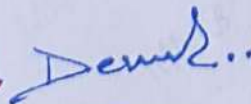
has been assessed and found to conform to the requirements of

ISO 14001:2015

for the following scope :

PROVIDING GRADUATION COURSES OF BA (H), BA (H) ENGLISH, BA (H) BENGALI, BA (H) EDUCATION & BA (P) PHILOSOPHY, BA (P) GEOGRAPHY, BA (P) POLITICAL SCIENCE, BA SANSKRIT

Certificate No : 24MEESQ93
Initial Registration Date : 10/09/2024 Issuance Date : 10/09/2024
Date of Expiry : 09/09/2027
1st Surve. Due : 10/08/2025 2nd Surve. Due : 10/08/2026



DIRECTOR

Magnitude Management Services Pvt. Ltd.



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GA/LM/2023-24/02

GREEN AUDIT, ENVIRONMENT & ENERGY AUDIT CERTIFICATE

Is awarded for 2023-2024 to the Esteemed Institution
LILABATI MAHAVIDYALAYA,
Alinagar Rd, Jateswar, Alipurduar, West Bengal 735216

This is to certify that LILABATI MAHAVIDYALAYA, Jateswar, Alipurduar has conducted detailed Environmental Green Audit including Energy Audit for 2023-24 for their campus and submitted necessary data and credentials for scrutiny. The activity and measure carried out by the college was found satisfactory. The efforts taken by the students, faculty members and the college authority towards Environment and Sustainability is highly appreciated and commendable.

Issued on 5th September, 2024 and valid till 4th September, 2025



Dr. Indranil Ghosh
Environmental Auditor &
Associate Professor in Environmental Science

Executive Summary

In accordance with the Environmental Policy of Lilabati Mahavidyalaya, the Green Audit, 2023-24 was conducted in the college in August, 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 Prof. (Dr.) Sushanta Kumar Roul, Principal of the college 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 Ms Sanghamitra Mookherjee, coordinator, IQAC and Ms Anamika Kundu for their 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 an idea regarding 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 National Assessment and Accreditation Council (NAAC), 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

Lilabati Mahavidyalaya, Jateswar, in the district of Alipurduar is a newly sanctioned government aided degree college. It is situated in the lap of nature and the wonderful beauty of the college campus generates joy and harmony in the minds of the people who come here. The college is dedicated to enlighten the minds of the socio-economically underprivileged but meritorious students by disseminating holistic education among them in the locality of Jateswar and adjacent areas. Ever since its inception, Lilabati Mahavidyalaya has aimed to cater to the requirements of the students who are the future of our nation. Most students of our college are first generation learners and are the first students coming from their community or areas to enter the field of higher education.

The college has been sanctioned by the Department of Higher Education, Government of West Bengal and is affiliated to the University of North Bengal. Our mission is to help to engender ideas that will help society, and to educate and train students to work in fields where they will be cherished for their specialised knowledge and for their aptitude. Most of the students of the college belong to socio-economically disadvantaged groups and higher education was a luxury for the poor but meritorious young minds belonging to Jateswar the adjacent areas. They had to travel to Birpara or Falakata or even further to Coochbehar, Alipurduar, and Jalpaiguri to enrol in the field of higher education. Since the inception of Lilabati Mahavidyalaya, the meritorious students belonging to the peripheral and marginalized categories have got a wonderful opportunity to continue their higher education. Life is full of struggles in these regions and the motto of the college is to help its students master the spirit of

determination, dedication and devotion towards nation building by imparting holistic education and by eradicating the darkness of illiteracy. With the learned faculty members and cooperative office staff, our college continuously strives towards preparing our students for the emerging competitive global market by injecting knowledge and analytical skills to make the best of the educational opportunities available in the beautiful 'Terai' regions of North Bengal and adjoining Dooars. Lilabati Mahavidyalaya has mapped out and started following a specific path towards improvement in the field of higher education in this remote area by spreading the light of education among our students.

The college is located on a beautiful campus of 4.77 Acre. The campus is located 66 km away from the District Head Quarter Alipurduar. The nearest Railway station Falakata is 11 km and Bagdogra airport is 115 KM away from here respectively. The campus is located in Jateswar (Alipurduar district, West Bengal 26.6107664°N 89.1395568°E) which has an average elevation of 69 metres (226 feet). The river Birkiti flows by the side of the college campus. The Dalgaon forest Jaldapara Reserve Forest are located within 3 km radius of the college campus. Tasati and Dalgaon tea estate are located in the surrounding areas.

The main road is away from the college buildings. The college is located on the branch road off Alinagar Road. There is only one building on the campus. The building has three floors. The total built up area is 0.25 acre. A few Tea plantations, Plywood industry and Rice mills are located in the 5 km radius of the college campus.

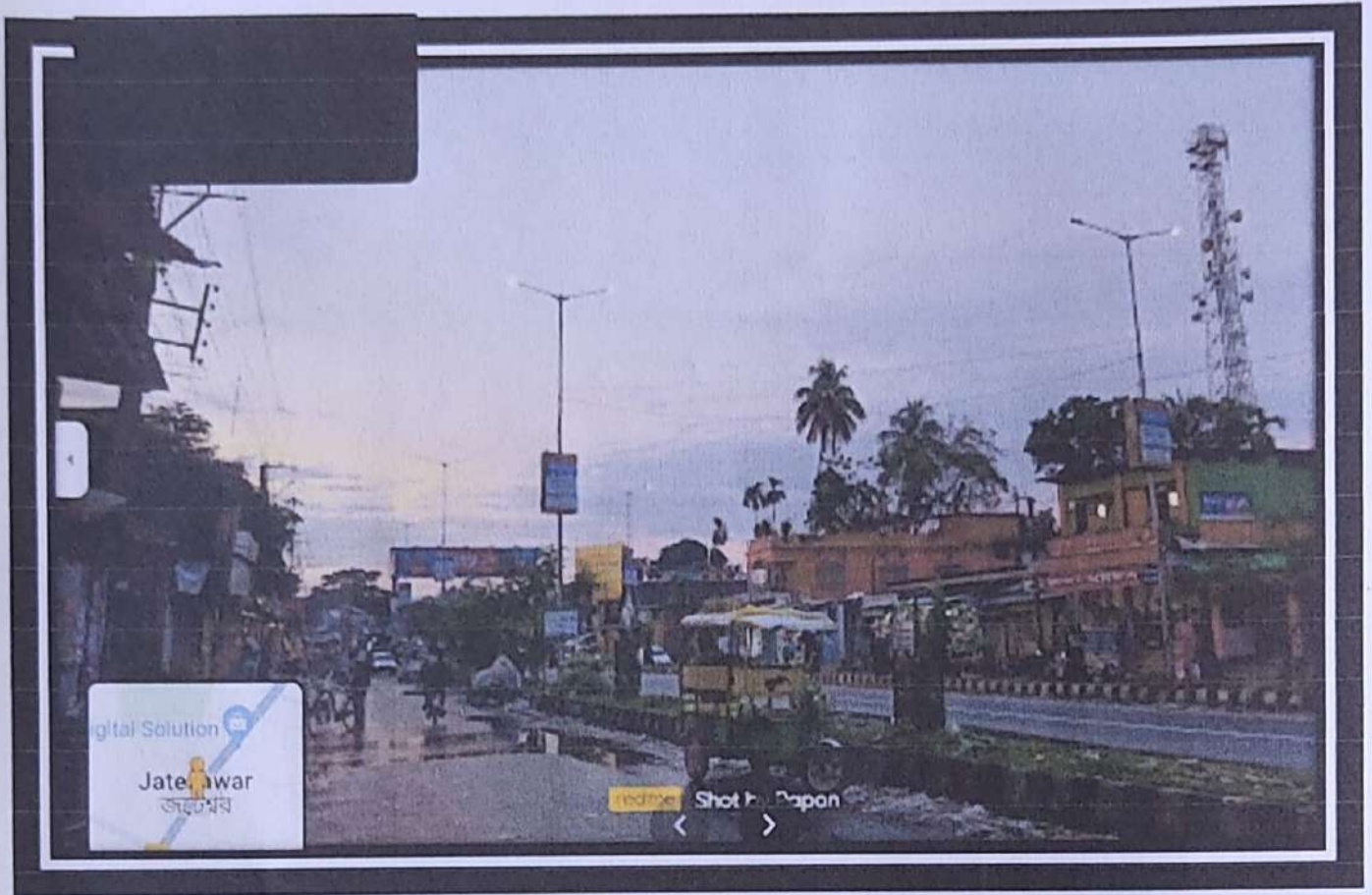
The college has only one shift and starts from 10:00 am and closes at 5:30 pm. Total 1200 (approx) students are studying in different under graduate programs.

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.



View of Jateswar



View of College Campus



View of College Campus

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.

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.

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

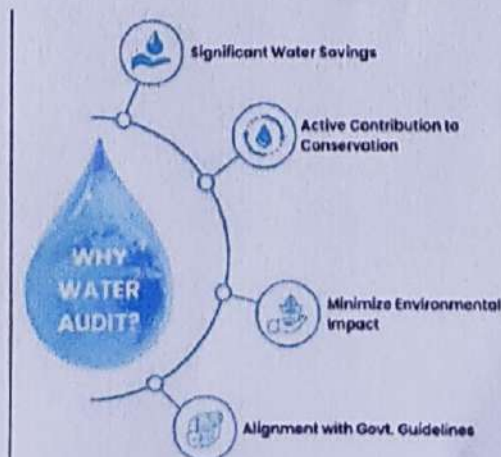
This indicator addresses water consumption, water sources, irrigation, storm water and fixtures. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

2.1.1 Observations

The study observed that the college uses the underground water by its own arrangements. 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 use of water in the college is 5000 L/day which include domestic purposes, gardening and for different laboratories. The college practices the rain water harvesting 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, (1 RO filter and 2 water coolers with purifier are in uses).
- 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 reduce in water usage 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 at 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 filter the water.
	Install Water recycling mechanism, such as rain water harvesting system	The college has Rain water Storage system.

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 8663 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 6 Air conditioning machines and four air coolers. Equipment like (25 numbers computers with TFT monitors, 3 laptops), 1 photocopying machine and printers (10) are used with power saving mode. The college conducts the switch off drills at regular intervals. In laboratories, the main 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 from 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 solarpanel 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 in winter season.
	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	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>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 summer recess).</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>



ENERGY AUDIT

Identifying Energy Efficiency Potential and Measures.

BENEFITS OF ENERGY AUDIT:

- Reduces Energy Costs
- Reduces Dependence on Procuring Energy Sources Externally
- Reduces Environmental Damage
- Reduces Consumption of Natural Resources
- Reduce Greenhouse Emission
- Optimal Performance of Boiler Components



4.0 Waste Management Audit

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction materials, glass, dust etc. and recycling. 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 little 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.

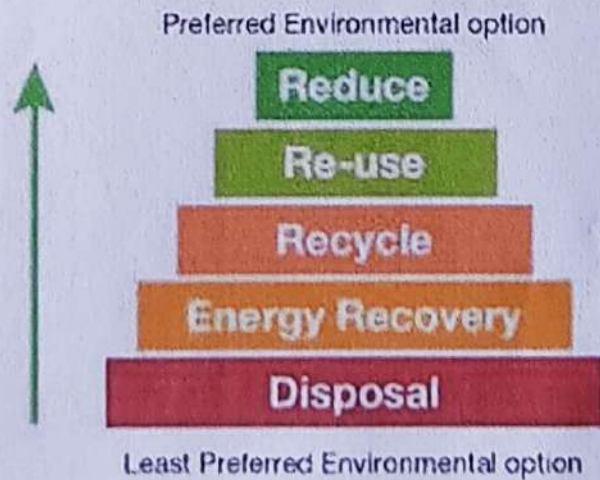
4.1.2 Recommendations

- Reduce the absolute amount of waste that is produced from college staff offices.
- Make full use of all recycling facilities provided by the 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
	Reduce the absolute amount of waste that is produced from college staff and offices.	The college has to a certain level controlled the amount of waste that it produces from staff offices.
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	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 composting facilities.
	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	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	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	The college has promoted reuse of items and waste recycling among staff, students and conference guests.
Promote reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives	The college disposes all waste, whether solid or otherwise, in a scientific manner and ensures that it is not released directly to the environment.
Adoption of paperless office to reduce waste.	College has implemented paperless office partially.



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

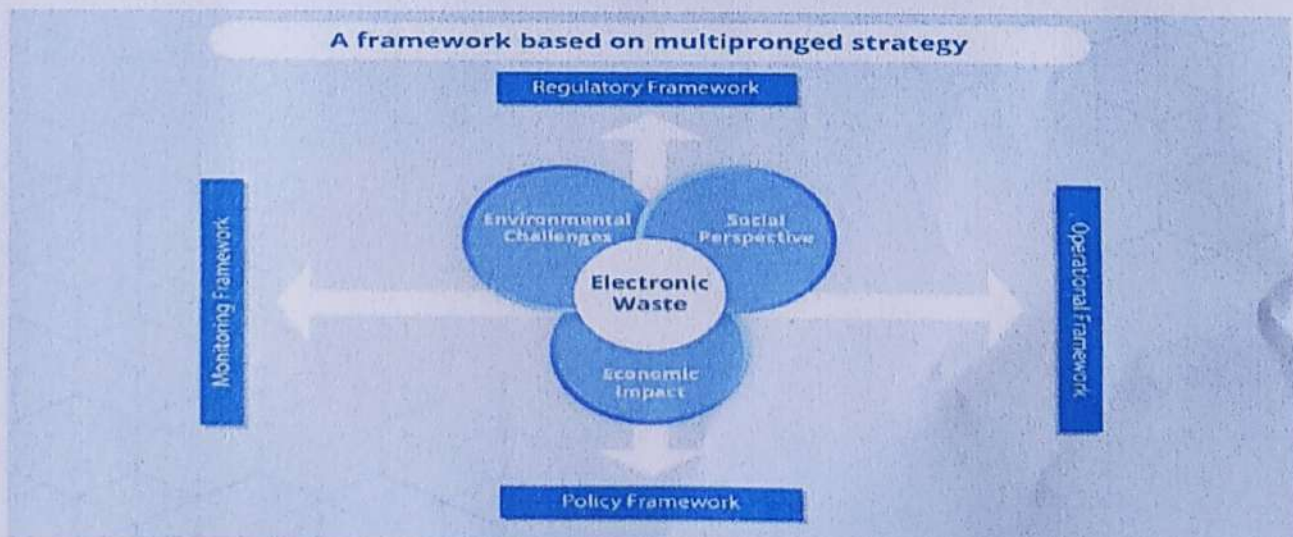
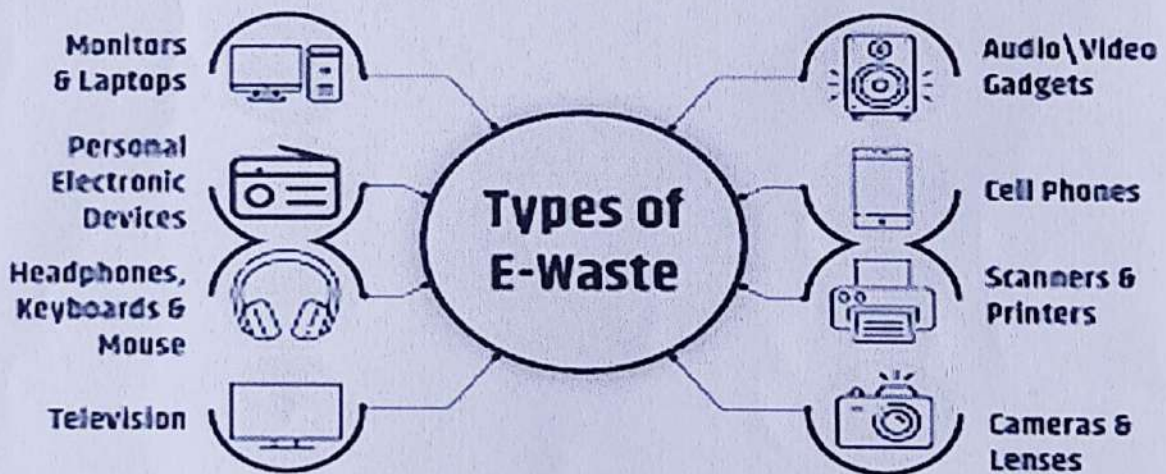
E-waste generated in the college is very little. It is handled, treated and disposed in scientific way. There are 25 computers (with TFT monitors), 10 printers and 01 photo copier are available in the college. The college generates some e-waste like chips, LED lights, circuit boards, mother boards, computers, 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. The local authority (Panchayat) takes it away.-



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

There is 2 acre 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, birds, insects and reptiles. Various tree plantation programs are organized at and arounds 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, medicinal and wild plant species. The college has open area of 4.5 acres and there are number of gardens at different sites on it, which is maintained by the gardener. The NSS unit of the college 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 curriculum, 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. The campus is constructed on Sahari, Danga and Dahala types of land.
	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 in collaboration.

6.3.1 Taxonomical identification of herbal plants in the campus

Sl No.	Local Name	English Name	Scientific Name
✓ 1	Aloe Vera	Aloe Vera	<i>Aloe barbadensis miller</i>
2	Amlaki/Amla	Indian Gooseberry	<i>Phyllanthus emblica</i>
3	Arjuna	Arjun	<i>Terminalia arjuna</i>
4	Bahera	Beach Almond	<i>Terminalia bellirica</i>
5	Bel	Stone Apple	<i>Aegle marmelos</i>
6	Bok Phool	Heron Flower	<i>Sesbania grandiflora</i>
7	Chalta	Elephant Apple	<i>Dillenia indica</i>
8	Golmarich	Black Pepper	<i>Piper nigrum</i>
9	Gurjo / Giloy	Giloy	<i>Tinospora cordifolia</i>
10	Haritaki	Chebulic myrobalan	<i>Terminalia chebula</i>
11	Jam/Jamun	Black Plum	<i>Syzygium cumini</i>
12	Kainjal	Bishop Wood	<i>Bischofia javanica</i>
13	Kalmegh	Green Chiretta	<i>Andrographis paniculata</i>
14	Kath Badam	Indian Almond	<i>Terminalia catappa</i>
15	Lebu	Lemon	<i>Citrus limon</i>
16	Lemon grass	Lemon grass	<i>Cymbopogan flexuosus</i>
17	Nayantara	Periwinkle	<i>Catharanthus roseus</i>
✓ 18	Neem	Neem	<i>Azadirachta indica</i>
19	Pudina	Mint	<i>Mentha piperita</i>
20	Rajanigandha	Tuberose	<i>Polianthes tuberosa</i>
21	Ram Tulsi	Basil	<i>Ocimum gratissimum</i>
22	Ritha	Indian Soapberry	<i>Sapindus mukorossi</i>
23	Rudraksh Tree	Utrasum Bead tree	<i>Elaeocarpus ganitrus</i>
24	Satamuli	Satavari	<i>Asparagus officinalis</i>
25	Tulsi	Holy Basil	<i>Ocimum tenuiflorum</i>

1. Local Name
2. Scientific name
3. Use

6.3.2 Taxonomical identification of trees in the campus

Sl No.	Local Name	Scientific Name	Count
1	Chhatim	<i>Alstonia scholaris</i>	1
2	Chalisa Chikoo	<i>Manilkara zapota</i>	1
3	Gamari (White Teak)	<i>Gmelina arborea</i>	1
4	Guava	<i>Psidium guajava L.</i>	3
5	Jamrul (Java Apple)	<i>Syzygium samarangense</i>	3
6	Kamini Flower	<i>Murraya paniculate</i>	10
7	Siris	<i>Albizia lebbek (L.) Benth.</i>	1
8	Banana Tree	<i>Musa paradisiaca Linn</i>	50
9	Bottle Palm	<i>Hyophorbe lagenicaulis</i>	38
10	Chinese Tagar / Pinwheel flower	<i>Tabernaemontana divaricata</i>	100
11	Debdaru	<i>Monoon longifolium</i>	88
12	Dragon plant	<i>Dracaena fragrans (L.)</i>	50
13	Yellow allamanda	<i>Allamanda cathartica</i>	2
14	Jaba	<i>Hibiscus rosa-sinensis</i>	4
15	Jarul	<i>Lagerstroemia speciosa</i>	2
16	Jhau gach	<i>Tamarix dioica</i>	10
17	Holud Kolke/ Yellow oleander	<i>Cascabela thevetia</i>	5
18	Madhumalati	<i>Quisqualis indiica</i>	1
19	Mango	<i>Mangifera indica</i>	1
20	Monkey Jackfruit (Bon Kathal)	<i>Artocarpus lakoocha</i>	6
21	Muktajhuri	<i>Acalypha indica</i>	1
22	Papaya	<i>Carica papaya</i>	2
23	Pata Bahar	<i>Codiaeum variegatum</i>	2
24	Kath Golap/ Champa	<i>Plumeria rubra</i>	6
25	Shimul	<i>Bombax ceiba L</i>	7
26	Sissoo	<i>Dalbergia sissoo</i>	1
27	Tun	<i>Toona sinensis</i>	5
28	Gandharaj	<i>Gardenia jasminoides</i>	2

6.3.3 Taxonomical identification of birds Species observed inside the college campus

Sl No.	Local Name	Common Name	Scientific Name
1	Shalik	Common Myna or Indian Myna	<i>Acridotheres tristis</i>
2	Tiya Pakhi	Indian Ring-neck Parrot	<i>Psittacula krameri m.</i>
3	Holde Pakhi/ Bene Bou	Black Hooded Oriole	<i>Oriolus xanthornus</i>
4	Kak	Crow	<i>Corvus splendens</i>
5	Pati Chorui	House Sparrow	<i>Passer domesticus</i>
6	Paara	Pigeon	<i>Columba livia</i>
7	Hutum Pencha	Indian Eagle Owl	<i>Bubo bengalensis</i>
8	Tile Ghughu	Spotted Dove	<i>Spilopelia chinensis</i>
9	Machranga	Common Kingfisher	<i>Alcedo atthis</i>
10	Bok	Heron	<i>Ardeidae</i>
11	Bulbul	Bulbul	<i>Pycnonotidae</i>
12	Doyel	Oriental Magpie-robin	<i>Copsychus saularis</i>
13	Papiya	Common Hawk Cuckoo	<i>Heirococyx varius</i>
14	Kokil	Asian Koel	<i>Eudynamys scolopaceus</i>
15	Chil	Pariah Kite	<i>Milvus migrans</i>
16	Choto Basanta Bouri/ Aamtota	Coppersmith Barbet	<i>Psilopogon haemacephalus</i>
17	Kath-thokra	Woodpecker	<i>Picidae</i>
18	Lokkhi Pencha	Barn Owl	<i>Tyto alba</i>
19	Phinge	Black Drongo	<i>Dicrurus macrocercus</i>
20	Jhunti Shalik	Jungle Myna	<i>Acridotheres fuscus</i>
21	Handi Chancha	Indian Tree Pie	<i>Dendrocitta vagabunda</i>
22	Chatare	Jungle Babbler	<i>Argya striata</i>
23	Tuntuni	Tailor Bird	<i>Orthotomus sutorius</i>
24	Moutusi	Purple Rumped Sunbird	<i>Leptocoma zeylonica</i>
25	Babui	Weaverbird	<i>Ploceidae</i>
26	Chokh gelo	Common hawk-cuckoo	<i>Hierococyx varius</i>
27	Bou katha-kae	Indian short-winged cuckoo	<i>Cuculus micropterus</i>
28	Basanta Bouri	Blue-throated Barbet	<i>Psilopogon asiaticus</i>
29	Tuntuni	Tailorbird	<i>Orthotomus sutorius</i>

6.3.4 Taxonomical identification of Animal/ mammals observed inside the college campus

Sl No.	Name	Scientific name
1	Dog	<i>Canis familiaris</i>
2	Cat	<i>Felis catus</i>
3	Indian Cow	<i>Bos indicus</i>
4	Goat	<i>Capra aegagrus hircus</i>
5	Sheep	<i>Ovis aries</i>
6	House Mouse	<i>Mus musculus</i>
7	Monkey	Infraorder <i>Simiiformes</i>
8	Cow	<i>Bos taurus</i>
9	Bat	<i>Chiroptera</i>
10	Asian Palm Civet (Bham)	<i>Paradoxurus hermaphroditus</i>
11	Red Fox	<i>Vulpes vulpes Linn</i>
12	Neyul (Striped Skunk)	<i>Mephitis mephitis</i>
13	Indian Grey Mongoose	<i>Herpestes edwardsii</i>
14	Rat	<i>Rattus norvegicus</i>
15	Bandicoot rat	<i>Bandicota bengalensis</i>
16	Rabbit	<i>Oryctolagus cuniculus</i>
17	Musk rat	<i>Ondatra zibethicus</i>
18	Kathberali / Squirrel	<i>Sciurus</i>

6.3.5 Taxonomical identification of fish available adjacent to the college campus

Sl no.	Local Name	Scientific Name
1	American puti	<i>Puntius</i>
2	Mottled eel	<i>Anguilla bengalensis bengalensis</i>
3	Barbel	<i>Cyprinus barbuis</i>
4	Bele	<i>Awaous grammepomus</i>
5	Boroli	<i>Barilius barila</i>
6	Boyal	<i>Wallago attu</i>
7	Chaina Puti	<i>Puntius sophore</i>
8	Chingri	<i>Metapenaeus</i>
9	Lyata	<i>Channa</i>
10	Ghar poa	<i>Garra rufa</i>
11	Glass carp	<i>Ctenopharyngodon idella</i>
12	Gochi	<i>Macroglythys aral</i>
13	Kal Baus	<i>Labeo calbasu</i>
14	Kankra	<i>Decapod crustaceans</i>
15	Katla	<i>Catla catla</i>
16	Khalisha/ Kholse	<i>Colisa fasciata</i>
17	Koi	<i>Cyprinus rubrofusus</i>
18	Swamp eel	<i>Synbranchus marmoratus</i>
19	Cuchia	<i>Monopterusuchia</i>
20	Lal Chanda	<i>Parambassis lala</i>
21	Magur	<i>Clarias batrachus</i>
22	Mrigel	<i>Cirrhinus cirrhosus</i>
23	Poya	<i>Otolithoides pama</i>
24	Rui	<i>Labeo rohita</i>
25	Shol	<i>Channa striata</i>
26	Shingi	<i>Heteropneustes</i>
27	Silver carp	<i>Hypophthalmichthys molitrix</i>
28	Taki	<i>Channa punctata</i>
29	Telapiya	<i>Oreochromis mossambicus</i>
30	Tyangra	<i>Mystus tengara</i>

6.3.6 Taxonomical identification of Reptiles, Amphibians available in the college campus

Sl no.	Reptiles/Amphibians	Scientific name
1	Toad	<i>Bufo melanostictus</i>
2	Geckos	<i>Gekkonidae</i>
3	Girgiti	<i>Chamaeleo zeylanicus</i>
4	Lizard	<i>Hemidactylus frenatus</i>
5	Skink	<i>Tiliqua scincoides</i>
6	Snake	<i>Serpentes</i>
7	Frog	<i>Rana tigrina</i>

6.3.7 Taxonomical identification of insects available in the college campus

Sl no.	Local Name	Common Name	Scientific Name
1	Pipre	Ant	<i>Formicidae</i>
2	Bolta	Wasp	<i>Vespidae</i>
3	Cheoyari/Yellow Jacket	Yellow Wasp	<i>Polistes versicolor</i>
4	Arshola	Cockroach	<i>Periplanata americana</i>
5	Phoring	Dragonfly	<i>Anisoptera, Zygoptera, Odonata</i>
6	Gandhi Poka	Green Stink Bug	<i>Chinavia hilaris</i>
7	Ghas phoring	Grasshopper	<i>Caelifera</i>
8	Gobore Poka	Dung Beetle	<i>Coleoptera</i>
9	Jok	Leech	<i>Hirudinea</i>
10	Jonaki	Firefly	<i>Lampyridae</i>
11	Kankra-bichhe	Scorpion	<i>Scorpiones</i>
12	Kenno	Earthworm	<i>Lumbricus terrestris</i>
13	Machi	Housefly	<i>Musca domestica</i>
14	Makarsha	Spider	<i>Araneae</i>
15	Mati Jhi Jhi Poka	Mole cricket	<i>Gryllotalpidae</i>
16	Mosha	Mosquito	<i>Culicidae</i>
17	Mou Machi	Honey Bee	<i>Apis mellifera</i>
18	Prajapati	Butterfly	<i>Lepidoptera</i>
19	Sabuj Machi	Greenfly	<i>Aphididae</i>
20	Sthal samukh	Snail	<i>Gastropoda</i>
21	Uui Poka	Termite	<i>Isoptera</i>





6.4 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year –

CO₂ emission from Electricity (electricity used per year in kWh/1000) x 0.84

$$= 103956 \text{ kWh/1000} \times 0.84$$

$$= 87.32 \text{ ton}$$

(before installation of PV it was 170 tons)

2. LPG/PNG used per year –

CO₂ emission from LPG/PNG (LPG/PNG used per year in KG) x 2.99 /1000

$$= (50 \times 2.99)/1000$$

$$= 0.15 \text{ ton}$$

3. Diesel used per year

CO₂ emission from HDS (Diesel) (Diesel used per year in litres) x 2.68

$$= 100 (\text{ approx.}) \times 2.68$$

$$= 212.14 \times 2.68$$

$$= 0.26 \text{ ton}$$

4. Transportation per year (car)

CO₂ emission from transportation (Bus and Car) College doesn't own any vehicles, so emission because of the transportation is Zero.

Total CO₂ emission per year = 87.73 TPA

6.5 CARBON ABSORPTION BY FLORA IN THE COLLEGE

There are 500 (approx) full grown trees and 750 (approx) semi grown trees of different species, on the campus spread over 4.77 acres.

Carbon absorption capacity of one full grown tree 22 kg CO₂ per Year

Therefore, Carbon absorption capacity of 500 full-grown trees 500 x 22 kg CO₂

$$= 11.00 \text{ tons of CO per Year}$$

The carbon absorption capacity of 750 semi-grown trees is 50% of that of full-grown trees.

Hence the carbon absorption 750 x 11 kg of CO₂ = 8.25 tons of CO₂ per Year

There are approximately Hedge Plants 5000 of various species being raised in the gardens and grown in the areas where no buildings are built. Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO₂ where as some others absorb very low level of CO₂. In the absence of a detailed scientific study, 250g of CO₂, absorption is taken per bush per Year

Based on this, total carbon absorption of bushes is $5000 \times 250 \text{ g} = 1.25 \text{ tons of CO}_2$

The lawns on the campus have grass, and indigenous grass species and cover a total area of 1.99 acre. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day.

Therefore, carbon absorption by lawn area = 8.66 g per day

= 3.16 kg per year

= 0.003 ton per year

Grand total of carbon absorption capacity of the campus is 20.5 TPA.



Green Campus of the College

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. Plantation drives are conducted in the surrounding locality as well.
	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 10:30 am to 5:30 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 car, motor cycle and bicycle etc. A well maintained parking place is available for the two wheelers and four 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 public transport mostly and very few by 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/ green field in the campus	The college has already maintained garden/green field of 2 acre. And 54 types of plants are there. Besides this, 27 types of birds, 19 types mammalians', different fish, amphibians, reptiles and insects are also available.
	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 reviews are conducted on frequent basis.
	Conduct environmental awareness workshops as a part of the program.	The College regularly organizes camps, seminar, and awareness programs.

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 the UGC guidelines/BOS of NBU 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. The total marks allotted to this project/ fields study report is 20. Students appear for the written test where 80 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 architecture.
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 NSS unit looks after the Environment Protection and Campus Beautification. The club 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 does not have any Nature Club.
	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 review 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.



Green Activities of the College

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 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, control of 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:

Ambient Air Quality of Falakata Block during August

District | Allpurduar
Device | Falakata Municipality

Device Location **Falakata Municipality**

Relative Humidity **62.91 %** Temperature **36.03 °C**

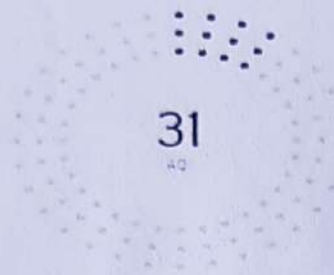
Latitude **26.5278820** Longitude **89.1939450** Date and Hour **2024-08-22, 13 hours**

Pollutant	Average	Minimum	Maximum
PM 2.5	26.94 µg/m ³	19.81 µg/m ³	35.80 µg/m ³
PM 10	46.22 µg/m ³	33.80 µg/m ³	62.14 µg/m ³
Temperature	30.28 °C	28.04 °C	34.81 °C
Humidity	83.47 %	66.18 %	91.52 %

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 (ug/m3)	PM 10 (ug/m3)
60	100

TODAY
8/22



Fair

The air quality is generally acceptable for most individuals. However, sensitive groups may experience minor to moderate symptoms from long-term exposure.

Based on Current Pollutants

Learn more :
 plume lab

<p>PM_{2.5}</p> <p>Fair</p>	<p>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 impacts are on the lungs and heart. Exposure can result in coughing or difficulty breathing, aggravated asthma, and the development of chronic respiratory disease.</p>	<p>31 9 µg/m³</p>
<p>PM₁₀</p> <p>Fair</p>	<p>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 issues. Exposure can result in eye and throat irritation, coughing or difficulty breathing, and aggravated asthma. More frequent and excessive exposure can result in more serious health effects.</p>	<p>24 19 µg/m³</p>
<p>O₃</p> <p>Excellent</p>	<p>Ground-level Ozone can aggravate existing respiratory diseases and also lead to throat irritation, headaches, and chest pain.</p>	<p>13 38 µg/m³</p>
<p>NO₂</p> <p>Excellent</p>	<p>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 infections can occur with longer exposure.</p>	<p>7 4 µg/m³</p>
<p>CO</p> <p>Excellent</p>	<p>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</p>	<p>2 206 µg/m³</p>
<p>SO₂</p> <p>Excellent</p>	<p>Exposure to Sulfur Dioxide can lead to throat and eye irritation and aggravate asthma as well as chronic bronchitis.</p>	<p>2 2 µg/m³</p>

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

**ଆଲପୁର ଜିଲ୍ଲା ମୁଖ୍ୟ ମଣିକାରି ଉପାଦାନ
(ସାମାଜିକ ସୁସ୍ଥ ମନ୍ତ୍ରାଳୟ)**

ଜିଲ୍ଲା ମୁଖ୍ୟ ମଣିକାରି ଉପାଦାନ : **Alipurduar District Water Testing Laboratory**

ଠିକଣା : **Alipurduar**

ସମ୍ପର୍କ : **L.Habali Mahavidyalaya, Jateawan, Alipurduar.**

Water Sample supplied by College Staff

ନମୁନା ସଂଖ୍ୟା : **04.08.2024** ପୃଷ୍ଠା ନମ୍ବର : **2**

କ୍ର. ସଂ.	ନିମ୍ନ ଉଲ୍ଲେଖ	ଦୃଢତା ବା ପ୍ରସ୍ଥାପନ (ଡି.ଏ.ଏ.ଏ.ଏ.ଏ.) (Turbidity) (NTU)	ଅମ୍ଳତ୍ୱ (pH)	ମୋଟ ଦୃଢତା (Total Hardness)	ସ୍ୱରସ (Iron)	ମାଙ୍ଗାନିଜ (Mangan-ese)	କ୍ଲୋରିନ୍ ରେସିଡୁଆଲ୍ (Residual Chlorine)	ମୁକ୍ତ କ୍ଲୋରିନ୍ ମାତ୍ରା (TD9)	ଫ୍ଲୁଆଇଡ (Fluoride)	ଆର୍ସେନିକ୍ (Arsenic)	ଟିପ୍ପଣୀ (Remarks)
		ସମ୍ମତ ମୂଲ୍ୟ (Permissible limit)									
		୫	୫.୫-୬.୫	୫୦୦	୧	୦.୫	୦.୫	୫୦୦	୧.୫	୦.୦୫	
		(5)	(5.5 to 6.5)	(500)	(1)	(0.5)	(0.5)	(2000)	(1.5)	(0.05)	
1	Post Office Room	0.27	7.25	260	0.24	0.07	-	294.00	NA	NA	-
2	College Ground	0.27	7.27	260	0.33	0.08	-	283.70	NA	NA	-

ସୁପାରିଶ (Recommendations)
 ସାମାଜିକ ସୁସ୍ଥ ଉପାଦାନ
 ଉପରୋକ୍ତ ମୂଲ୍ୟ ସମ୍ମତ ହୋଇଥିବା ସ୍ୱାସ୍ଥ୍ୟକାରୀ ମାନର ମାନ (କୌଣସି ସମ୍ପର୍କ ନାହିଁ) ହେଉ
 ନାହିଁ ବରଂ ସ୍ୱାସ୍ଥ୍ୟକାରୀ ହେବା ପାଇଁ ଉପରୋକ୍ତ ମାନର ସମ୍ପର୍କ କରାଯିବାକୁ ହେବ।
 ଉପରୋକ୍ତ ମାନର ସମ୍ପର୍କ କରାଯିବା ପାଇଁ କାର୍ଯ୍ୟକାରୀ ପଦକ୍ଷେପ ଗ୍ରହଣ କରନ୍ତୁ।

Sajal Biswas
Dr/Asst/Chemist
 (ଜିଲ୍ଲା ମୁଖ୍ୟ ମଣିକାରି ଉପାଦାନ)

Chemist
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 Alipurduar P.H.E. Dte.



Junior Engineer
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জীবাণু মূল্য সংক্রান্ত পরীক্ষার কলাকল						
ক্রমিক নং Sl. No.	জলের উৎসের বিবরণ (Location)		মোট কলিফর্ম (TC) (MPN/100 ml) or (CFU/100 ml)	থাইটলোজেন্ট কলিফর্ম (FC/TCC) (MPN/100b ml) or (CFU/100 ml)	স্বাস্থ্যবিদ্যানে বিয় সূচিকারী 'কুঁকি'র সংখ্যা (Sanitary risk score)	উৎসের জল নিরাপত্তা এবং পানের উপযোগী কিনা (Safety status)
			অনুমোদিত সীমা		---	---
			যেকোনো ১০০ মিলি জল জীবাণু মুক্ত হতে হবে (Shall not be detectable in any 100 ml)			
1	Tap	Near Office Room	0	0	-	-
2	TW	College Ground	18	0	-	-

স্বাস্থ্যবিদ্যানে বিয় সূচিকারী 'কুঁকি'র সংখ্যা (Sanitary risk score)	
০ : কুঁকি হীন	(no risk)
১-৩ : সামান্য কুঁকি	(low risk)
৪-৬ : বেশী কুঁকি	(high risk)
৭-৯ : অত্যধিক বেশী কুঁকি	(very high risk)

সুপারিশ (Recommendations):
জীবাণু মুক্ত সক্রিয় এম কেটে:
সংশ্লিষ্ট পক্ষকে হাটহাট সতর্কতার সাথে মুক্ত নলকূপটি মুক্ত করে ব্যবস্থা করবেন।
শ্রম পরীক্ষার ফলে এই জল সম্পূর্ণ নিরাপত্তা এই মর্মে শসোপত্র না পাওয়া পর্যন্ত নলকূপটি পর্যবেক্ষণে জীবাণু মুক্ত করতে হবে। (মুক্তির মুক্ত করার পরে এই নলকূপের জল পুনরায় পরীক্ষা করতে হবে।)

Sajib Bhosnyak
05/09/2024
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Appendix : Water Quality Parameter

Parameter	Bureau of Indian Standards (BIS 2009) acceptable limit	WHO standard 2011 desirable limit
pH	6.5 - 8.5	7.0 - 8.5
TDS	500	600
Alkalinity	200	300
DO	5	NA
EC	750	750
Salinity	100 PPT	100 PPT
Turbidity	1 NTU	1 NTU
Na ⁺	200	50
Mg ²⁺	30	30
Ca ²⁺	75	100
F ⁻	1	1.5
Cl ⁻	250	250
NO ₃ ²⁻	50	50
SO ₄ ²⁻	200	250

NA - Not Available

Appendix: Ambient Noise Quality at Falakata

Noise Level 64.57 db(A)		
Device	Falakata Municipality	
Zone	Commercial	
District	Alipurduar	
Timestamp	August 22nd 2024, 4:19 pm	
Parameter	Value	
LAs	57.48	
LCs	61.50	
LZs	63.18	
LAeqt	61.77	
LCeqt	69.55	
LZeqt	69.55	
LApeakt	88.20	
LCpeakt	92.64	
LZpeakt	94.46	
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 LILABATI MAHAVIDYALAYA, Jateswar, Alipurduar, West Bengal

INTRODUCTION:

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.

OBJECTIVES OF GREEN CAMPUS CONCEPT:

- The first step of the Go Green Programme involves establishing a viable Green-Campus Committee, within the organizational structure of the Institute.
- Hence, to give this initiative more clarity and authenticity, we now roll out a POLICY DOCUMENT spelling out the strategies, plans and other allied tasks to make this Program functional officially.
- Greening the campus is all about sweeping away wasteful inefficiencies and using conventional sources of energies for its daily power needs, correct disposal handling, purchase of environment friendly supplies and effective recycling program.
- The Institute has to work out the time bound strategies to implement green campus initiatives. These strategies need to be incorporated into the institutional planning and budgeting processes with the aim of developing a clean and green campus.

- Our initiative will include working with students, faculty members and support staff to foster a culture of self-sustainability and make the entire campus environmental friendly. The Green Campus Initiatives (GCI) will enable us to develop the campus as a living laboratory for innovation.

LANDSCAPING INITIATIVE:

- Our college has a scarcity of open land space hence plantation to be carried out will be done within the building area, all to be light weighted so that the college building does not bear additional potting weights.

CLEAN AIR INITIATIVE:

- Our college pledges to reduce air pollution
- Maintain good green cover to enhance CO₂ sequestration from campus.
- No vehicle day in a month to be initiated.

WASTE MANAGEMENT PROCESSES:

- This Policy underlines our commitment with regard to sustainable waste management. It outlines a set of agreed aims and deliverables for all aspects of sustainability, including recycling and waste management.
- The college adheres to the following principles of the waste management:
 - Prevent - avoid creating waste
 - Reduce - minimising the amount of waste produced
 - Reuse - repair, refurbish or relocate items
 - Recycle - promote segregation of waste to increase the quantity of waste recycled
 - Recovery - send non-recyclable waste to energy recovery
 - Disposal - this will only be used as a last resort if all other options are exhausted

Solid Waste Management:

- Measures shall be taken for minimal or optimal use of papers: instead of taking hard copies of documents, keep in digital format as far as possible.
- Strategies to lessen the generation of paper waste are adopted: double-sided printing, printing in reduced font size, printing in "fast draft" mode etc.
- e-billing is promoted to reduce use of paper.

- Use of paperclips (over staples) is encouraged.
- Reusing of envelopes with metal clasps and file folders by sticking a new label over the previous one is promoted.
- Colour coded dustbin system is employed for segregation of solid waste: green dustbins for biodegradable wastes like food; blue dustbins for disposal of plastic wrappers and non- biodegradable wastes.
- Partial Food waste is used to generate fertilizer using the Compost pit construction in the campus.
- Cleaning or emptying of dustbins is ensured at regular intervals daily.
- Sanitary napkins are disposed in incinerators installed in the campus.

Water consumption management:

- Reducing water usage: Colleges aim to reduce water consumption year on year, and to minimize unnecessary water usage.
- Promoting water conservation: Colleges encourage water conservation education and promote water-efficient practices.
- Using water-saving technologies: Colleges install water-saving technologies in new buildings and refurbishments, and implement them in existing buildings over time.
- Using low-flow fixtures: Colleges encourage the use of low-flow faucets and fixtures.
- Recycling water: Colleges implement water recycling programs to reuse wastewater.
- Communicating with stakeholders: Colleges communicate with students and staff to encourage water-saving behaviour.
- Collaborating with local governments: Colleges coordinate water planning with local governments.

E-waste Management:

- Obsolete electronic devices are disposed through approved agencies.
- Purchasing of devices with increased life time is encouraged.
- The buyback policy of the retailers will be utilized to purchase new computers and batteries for out-dated computers and laptops.
- MOUs with relevant agencies are renewed time to time.