GREEN AUDIT REPORT
OF
NETAJI SUBHASH ENGINEERING COLLGE
2019-20

AUDITED BY

ENVIRONMENTAL SAFETY AND HEALTH AUDIT AGENCY (ESHAA)

CERTIFICATE

This is to certify that Netaji Subhash Engineering College, West Bengal has conducted detailed Environmental Green Audit for 2019-20 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.

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Environmental Safety Health Audit Agency (ESHAA)

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Executive Summary

In accordance with the Environmental policy of Netaji Subhash Engineering College for 2019-20, the Environmental Safety Health Audit Agency (ESHAA) conducted a green audit of the college in December, 2020.

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 our Principal and Director of the Netaji Subhash Engineering College for their 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.

Assurance

This audit has been conducted in accordance with the *International Standards for the Professional Practice of Internal 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 it is a systematic, documented, periodic, and objective review by regulated entities of facility operations and practices related to meeting 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. Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit.

There is relationship between Green Audit and Sustainable Development of the any business organization. The primarily needs for achieving the sustainable development of the business are 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

The Netaji Subhash Engineering College (NSEC) has been set up; keeping in mind the ideals of Netaji Subhash Chandra Bose, whose contribution to the Indian Freedom Movement remains invaluable forever. Netaji had dreamt of vibrant, strong and powerful India, an India which would be independent and self reliant, not only politically, but also in the spheres of Education & Technology. He strongly believed that true independence can only stem from strong base in education and technology.

His vision is our beacon and to give a concrete shape to his vision, we have set up Netaji Subhash Engineering College. We believe in his ideals that intelligent minds are the greatest resources in any walk of life. Our vision is to infuse young intelligent minds with cutting edge technical

education and help them to become matured professionals poised and ready to accept technical and managerial challenges in the global scenario.

Apart from 4 years B.Tech the Institute also offers 2 years Masters of Technology Programmes and 3 years Masters Programme leading to MCA, approved by Department of Higher Education, Govt. of West Bengal and All India Council for Technical Education (AICTE), Ministry of Human Resource Development, Govt. of India and affiliated to Maulana Abul Kalam Azad University of Technology, West Bengal (Formerly known as West Bengal University of Technology - WBUT).

Netaji Subhash Engineering College, affiliated to Maulana Abul Kalam Azad university of Technology, made its humble beginning on 1998, for engineering degree course. The college is located on a beautiful campus of 3 acre (approx). The campus is located near New Garia Eastern railway station and Kabi Subhash Metro sattion . There are three buildings in the campus and each contains five floors. The total built up area is 14521.75 sq m.

The college is thinking about to adopt the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on occupational health and performance and 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 though reporting will enhance the image of the company.

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
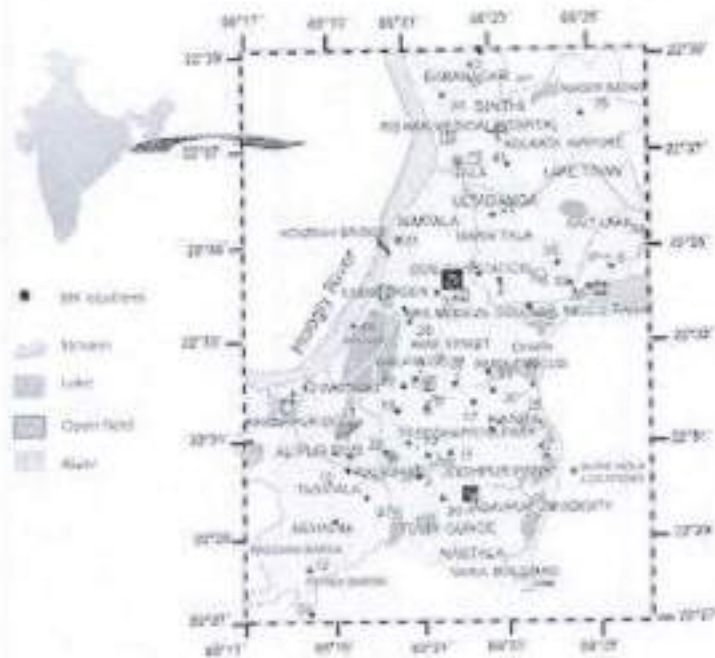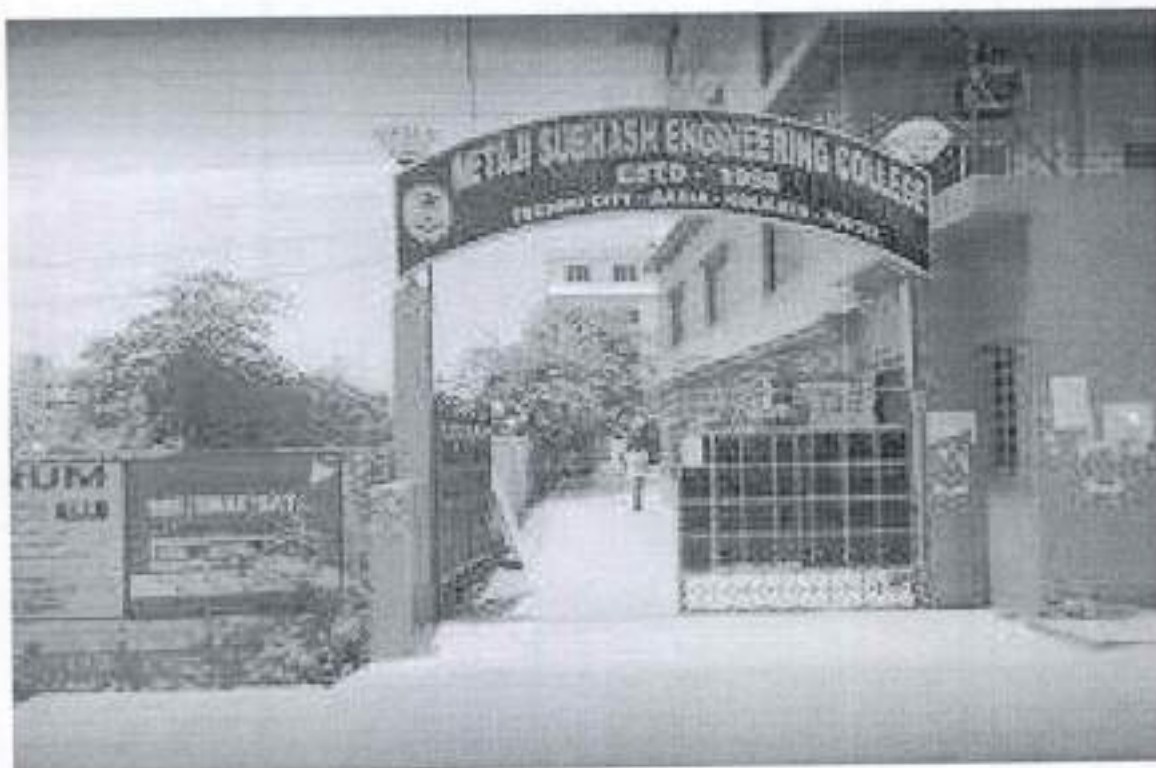
1.4 The audit process

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 of the date of the audit 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' organisation, 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:

- o Water management
- o Energy Conservation
- o Waste management
- o E-waste management
- o Green area management
- o 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 use 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 Boring Well is the major source 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. The data collected from all the departments is examined and verified. On an average the total use of water in the college is 1000 L/day, which include 600 L/day for domestic purposes, 175 L/day for gardening and 50 L/day for different laboratories.

The work on rain water harvesting is under process.

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, 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.

- 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	Practised as much as possible.
	Encourage a decrease in water usage among staff, students and conference guests	The college encourages decreasing the water usage among staff, students and conference guests because water consumption is minimal.
	Purchase the most efficient washing machines and dishwashers available which have an economy setting as default	No, college does not purchase the most efficient washing machines and dishwashers as these are not required by the college.
	Use an efficient and hygienic water storage mechanism is to minimize the loss of water during storage	College has water reservoirs. Water pumped from the bore well store there before the distribution. The reservoirs are cleaned in regular interval to maintain the hygiene.
	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	College has Water purifier with RO and large water filter with RO at the different strategic locations in the college for the students. All are with AMC.
	Install Water recycling mechanism, such as rain water harvesting system	It is under process.

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 5000 KWH/Year by major energy consuming equipment. All the departments and common facility centres are equipped with CFL/LED lamps. Approximately 1.54% (Capacity) of total consumption is measured during survey. Equipments like Computers are used with power saving mode. Also, campus administration runs switch –off drill on regular basis. In all the laboratories the switches were shut down after occupancy time and are one of 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 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 WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED. 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.	No. Planned to be installed very soon.
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College are using CFL/ 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 heater is used even in winter season.
	Encourage staff, students and conference guests to save energy through visible reminders, incentives and information to increase awareness. This particularly	Misuse of electricity is controlled by turning off the appliances when not required.

	concerns turning off electrical appliances when not in use in both communal and residential rooms	
	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.	Disconnect the supply of electricity when not required.(Specially during the month long vacation).
	Conduct switch off drills at regular intervals	Yes
	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	All electronic and electrical equipment's are switched off when not in use. Equipments are configured in power saving mode when such option is available.
	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	Equipment's running on standby mode.

4.0 Waste Management

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, 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 as mentioned above.

4.11. Observations

The total solid waste collected in the campus is 6 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 dustbins for Bio-degradable and Plastic waste. Segregation of chemical waste generated in Chemistry Laboratories is also practiced. Single sided used papers reused for writing and printing in all departments. Unimportant and non-confidential reports/ papers are sent for pulping and recycling after completion of their preservation period. Very less plastic waste (0.02Kg/day) is generated by some departments, office, garden etc but it is neither categorized at point source nor sent for recycling. Metal waste and wooden waste is stored and given to authorized scrap agents for further processing. Few glass bottles are reused in the laboratories.

4.1.2 Recommendations

- Reduce the absolute amount of waste that it produces from college staff offices.
- Make full use of all recycling facilities provided by Municipality and private suppliers, including glass, cans, white, coloured and brown paper, 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 it produces from college staff offices.	No, the college have not used any controls to reduce the absolute amount of waste that it produces from staff offices.
	Make full use of all recycling facilities provided by City Municipality and private suppliers, including glass, cans, white, coloured and brown paper, plastic bottles, batteries, print cartridges, 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.	No. College has not 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
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	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.

5.0 E-waste Management

E-waste can be described as consumer and business 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 in the   institute. It is handled, treated and disposed in scientific way. There are 1000 computers (with TFT monitors), 40 printers, 15 scanners, 04 photo copiers and 05 photocopy-cum- printer-cum-scanners are available in the college. The college generates some e-waste like chips, bulbs, circuit boards, mother boards, computers, batteries, relays, and switches. The college has practice of paperless office work administration 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. 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 80 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). 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.
	Adoption of paperless office to reduce E waste.	Yes! College has implemented paper less office partially.

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 Observations

Around 6000sq m (approximately) land is available as green area. Campus is located in the vicinity of different types (species) trees. 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.

Following plants are available in the college:

6.1.2 Recommendations

- Reviews periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Give scientific names to the trees.
- 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 takes actions to ensure environmental sustainability.
- 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.
- 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.	Yes, there is taxonomical identification of the plants.
	Conduct Environment Awareness program.	Environment Awareness program regularly organized by the college authority.

6.3 Taxonomical identification of plants in the campus

1. Coroton: Croton californicus
2. Hejing tagar: Tabernaemontana divaricata
3. Golap: Rosa rubiginosa
4. Gulmohor: Delonix regia
5. Bel: Aegle marmelos
6. Jui: Jasminum sambac
7. Tecoma: Tecoma stans
8. Erika palm: Dypsis lutescens
9. Ponsetia: Euphorbia pulcherrima
10. Cycus: Cycas revoluta
11. Jhau: Tamarix dioica
12. Joba: Hibiscus sabdariffa
13. Sunflower: Helianthus annuus
14. Elamunda: Allamanda cathartica
15. Musanda: Mussaenda erythrophylla
16. Kunda: Jasminum multiflorum
17. Rangan: Ixora coccinea
18. Bogenvelia: Bougainvillea spectabilis
19. Champa: Plumeria rubra
20. Nayantara: Catharanthus roseus
21. Christmas tree: Araucaria heterophylla
22. Phonix palm: Phoenix canariensis
23. Gandharaj: Gardenia jasminoides
24. Kamini: Murraya paniculata
25. Phycus benzenium
26. Mango: Mangifera Indica
27. Ashfol: Euphoria longana
28. Guava: Psidium guajava
29. Neem: Azadirachta indica
30. Pomelo: Citrus maxima
31. Patilebu: Citrus limon
32. Amloki: Phyllanthus emblica
33. Madhobi: Combretum indicum.

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. Treatment of chemical waste
4. Campaign for Go Green
5. Green Policy

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	No
	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 regularly as the canteen is in full swing.
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 staffs and students are attending the college by public transport or by own transport

		like Bicycle, motor cycle etc., College provides pick up and drop facility to the faculty members and other staffs from the a suitable point.
	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. It hires vehicles from the vendors. College uses hired vehicle for the faculty trip and other official works.
	Promote car sharing / car pool among the students and faculty members	Students use either public transport or 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.
	Dispose the chemical waste generated from the laboratories in a scientific manner	Different routine experiments are conducted as per the curriculum and there is no toxic chemical used in the chemistry laboratory which may lead to the generation of different chemical pollutants. The wastes which are generated are collected and disposed separately. After collecting separately they are diluted and safely disposed to large water bodies through normal sewerage system. (Usually make it more dilute by addition of water to avoid bio magnification).
	Reduce the practice of burning Plastic and other material that emits harmful gas on burning is prevented in the campus.	Use of plastic is strictly restricted.
	Establish a Garden in the campus	The college has already maintained garden.
	Minimize the use of fertilizers and pesticides in college grounds, opting for the use of compost produced on site	Negligible amount of fertilizers and pesticides are used in the college.

	wherever possible	
	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	No such review conducted.
Ensure that environmental awareness is created	Conduct environmental awareness workshops as a part of the program.	Yes!
	Conduct events such as plant trees to spread environmental awareness among the students	College students usually do that through the NSS unit of the college.
	Create awareness of environmental sustainability and takes actions to ensure environmental sustainability.	Yes
	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 of NEP and the syllabus framed by the university the subject Environmental Science has introduced in the curriculum of all the streams.
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	No constructions are in compliance with green 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	Eco Cultural Club of the college takes the responsibility.
	Ensure that on the Nature Club there will be appropriate representatives of the relevant college departments and authorities – such as catering, gardening, maintenance,	Eco Cultural club of the college is involved in this task.

	cleaning and finance	
	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 Cell of the college takes the responsibility.
	Ensure that the Environmental Policy is enforced regardless of whether its requirements exceed the mandate of the law	Environmental policy available.
	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 that the 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.

Recommendations

- o College should formulate Environmental management policy/ Green policy to achieve the sustainable development

- o The Environmental Protection Committee should be empowered to look after all the green practices in the college

- o More Seminar/ workshop should be organized to create the awareness of Environmental conservation among the students and other stake holders.

Conclusions

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 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 the prosperous future in context of Green Campus & thus sustainable environment and community development.

As part of green audit of campus, we also carried out the environmental monitoring of campus includes Illumination, Noise level, 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 well within the limit i.e. below 50 dB at day time.