ENVIRONMENT AUDIT REPORT FOR GURU GOBIND SINGH EDUCATIONAL SOCIETY's TECHNICAL CAMPUS

Elion Technologies & Consulting Private Limited

307, 3rd Floor, DDA Lal Market, H-Block
Vikas Puri, New Delhi-110018
Contact No: +91 9013923982,+91 9013890526
Web: www.elion.co.in.

Table of Contents

Acknowledgement

Elion Technologies and Consulting Pvt Ltd thanks the management of Guru Gobind Singh Educational Society's Technical Campus for assigning this important work of Environmental Audit. We appreciate the co-operation to our team for completion of study.

For giving us necessary inputs to carry out this very vital exercise of Environment Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

Site Information

Name of College	Guru Gobind Singh Educational Society's Technical Campus
College Address	Guru Gobind Singh Educational Society Guru Gobind Singh Public School, Sector - V/8, Bokaro Steel City - 827006
Execution Partner	ELION Technologies & Consulting Pvt Ltd
Communication Address	307, 3rd Floor DDA Lal Market H-Block Vikas Puri, New Delhi, 110018
Date of Audit	19th April 2024
Year of Audit	2023 – 2024
Audit Participants	Dr. Priyadarshi Jarohar (Director) Dr. R.P. Verma (Dean)
Total College Area	14.0 Acres
Total Green Area	6.60 Acres

Concept

The term 'Environmental audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of Environmental Audit, many leading companies/ institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as:
"A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects."

The European Commission, in its proposed regulation on environmental auditing, has also adopted the ICC definition of Environmental Audit.

Introduction

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user- friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

Overview of Campus

The Guru Gobind Singh Educational Society's Technical Campus (GGSESTC) has started its journey of academic excellence in the year 2011. The Technical Campus is promoted by Guru Gobind Singh Educational Society.

The Guru Gobind Singh Educational Society established in 1979, is non-profit organisation working in the field of technical education. The Society has many schools running under its umbrella at various parts of the country. After 32 years of service to the society nationwide, it has been decided by the society to establish a Technical Campus in the name of Guru Gobind Singh Educational Society's Technical Campus at Bokaro, Jharkhand.

The institute has a lush green sprawling campus spread over about 20 acres of land within the vicinity of twin city of Chas and Bokaro at Jharkhand. It is a fully self-financed institute.
We are paving the path for significant development & tremendous growth of our budding professionals graduating from GGSESTC for global perspective for sustainable impact on the society. We feel the amount of time our students spend here should be focussed on developing them to be a professional with never ending zeal to learn, innovate & experiment.
Our faculty members have humongous knowledge base in their field of work. They facilitate transfer of learning very well with the kind of experiences & distinguished qualifications they possess. We focus on individual development of our students in Technical as well as soft skills by conducting & organising various training programmes, workshops, seminars, guest lectures & industrial visits by eminent professionals from well renowned Institutes, Colleges & Industries.

We have one of its kinds of State-of-the-art Infrastructure and facilities with well-equipped labs, advanced & developed Technologies.

Our alumni have performed remarkably well in their fields of interest. We believe that they have always made us proud and they are the flag bearers of our brand's excellence.
We wish you a pleasant navigation through our website.

VISION

To provide world class education, training and research opportunities in fields of Technology Management and other disciplines.

MISSION

To be centre of academic excellence and an ecosystem vehicle for aspiring technologists and entrepreneurs.

OBJECTIVE

To be amongst top institutions in Jharkhand in terms of:

- Engaging with Indian corporates and institutions for knowledge sharing and development of the institute.
- Dissemination of knowledge through Research & Training.
- Improving through Rankings and Accreditations.
- Adoption of Contemporary Technology in Teaching, Learning and other processes.

List of courses offered by the institute:

Following are the list of courses offered by the institute-

- Bachelor of Technology (CSE, ECE, EEE, ME, CE)
- Master in Business Administration
- Bachelor of Business Administration
- Bachelor of Computer Applications

Audit Objectives

The broad aims/ benefits of the eco-auditing system would be –

- Environmental education through systematic environmental management approach.
- Improving environmental standards.
- Benchmarking for environmental protection initiatives.
- Reduction in resource use.
- Financial savings through a reduction in resource use.
- Curriculum enrichment through practical experience.
- Development of ownership, personal and social responsibility for the college campus and its environment.
- Enhancement of university profile.
- Developing an environmental ethic and value systems in young people.

Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

This is second environmental audit of campus for NACC affiliation; QS Program and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

Environmental Audit

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

I. Waste Minimization and Recycling
II. Greening
III. Energy Conservation
IV. Water Conservation
V. Clean Air
VI. Animal Welfare
VII. Environmental Legislative
VIII. General Practices

Is any Environmental Audit conducted earlier?
No, this the first time.

What is the total permanent population of the Campus?

	Male	Female	Total
Students	590	253	843
Teachers	71	14	85
Non-Teaching Staff	37	12	49
Sub Total	698	279	977
Approximate Number of Visitors (Per day)			100
What is the total number of working days of your campus in a year?			250

Where is the campus located?
The campus is Located at Bokaro steel city, rural area.

Which of the following are available in your campus?

1	Garden area	Yes
2	Playground	Yes
3	Kitchen	Yes
4	Toilets	Yes
5	Garbage Or Waste Store Yard	Yes
6	Laboratory	Yes
7	Canteen	Yes
8	Hostel Facility (Numbers)	Yes (Boys & Girls)
9	Guest House	Yes

Which of the following are found near your campus?

1	Municipal dump yard	No
2	Garbage heap	No
3	Public convenience	No
4	Sewer line	No
5	Stagnant water	No
6	Open drainage	No
7	Industry – (Mention the type)	No
8	Bus / Railway station	No
9	Market / Shopping complex / Public halls	No

I - WASTE MINIMIZATION AND RECYCLING

1.	Does your campus generate any waste? If so, what are they?	Yes. Paper waste, Solid Waste and Left over food (Canteen)
2.	What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)	2Kg/Day per day.
3.	How is the waste generated in the campus managed? By 1 Composting 2 Recycling 3 Reusing 4 Others(specify)	Composting pit is provided for the waste management.
4.	Do you use recycled paper in campus?	No
5.	Do you use reused paper in campus?	Yes, for printing the drafts of letters the paper is reused. Used to paste news related to campus published in the newspaper.
6.	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.	Yes, Campus has MOU signed with district government institutions.
7.	Can you achieve zero garbage in your campus? If yes, how?	Yes. - Composting pits - Green Campus Policy - Green Army

II – GREENING THE CAMPUS

1.	Is there a garden in your campus?	Yes
2.	Do students spend time in the garden?	Yes
3.	Total number of Plants in Campus	1010
4.	Provide some names of trees and plants in the campus.	Ashoka, Mango, Gulmohar etc.
5.	Is the university campus have any Horticulture Department?	Yes
	If yes, number of Staff working in Horticulture Department?	06
6.	Number of Tree Plantation Drives organized by institute per annum.(If Any)	5-7
7.	Number of Trees Planted in Last year.	100 approx.
	Survival Rate	75%
8.	Plant Distribution Program for Students and Community	Yes, Green army constituted in the campus. Green army is responsible for plant distribution program for students and community.
9.	Plant Ownership Program	Yes, Green army constituted in the campus. Green army is responsible for plant distribution program for students and community.

III – ENERGY

1.	List down ways that you use energy in your campus. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.	1. Electricity Supply from Distribution board 2. Solar Energy 3. LPG
2.	Are there any energy saving methods, equipments, techniques employed in your campus? If yes, please specify. If no, suggest some	1. Solar Power system. 2. Replacement of conventional lights with LED lights. 3. Solar Operated Pole lights 4. Switching of lights
3.	Give an estimate of number of lights installed in your campus along with numbers?	1219 lights
4.	Are any alternative energy sources employed/ installed in your campus? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Solar Energy
5.	Do you run "switch off" drills at campus?	Yes
6.	Are your computers and other equipment's put-on power-saving mode?	Yes
7.	Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?	Yes (2 hours)

IV - WATER CONSERVATION

1.	List all the uses of water in your campus?	1. Drinking Purpose. 2. Sanitary Purpose. 3. Gardening.
2.	How does your campus store water? (mention tanks with capacity) Are there any water saving techniques followed in your campus?	1. RCC Tank – 10,000 Liters 2. Overhead Tanks – 25,000 Liters (Boys Hostel) 3. Overhead Tank – 20,000 Liters (Girls Hostel)
3.	If there is water wastage, specify why and how can the wastage be prevented/ stopped?	No water leakage evident and observed during the visit.
4.	Locate the point of entry of water and point of exit of waste water in your campus. Entry- Exit-	Entry – Building through taps Exit – Sewage Line
5.	Write down few ways that could reduce the amount of water used in your campus?	1. Detect and repair leakages at Institute taps so that wastage of water will get reduced. 2. Avoid flushing the toilet unnecessarily. 3. Dispose of tissues, and other similar waste in the dustbins rather than the toilet. 4. Water Conservation Signage 5. Dual Flushing System 6. Tap Aerators

6.	Record water use from the campus water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many litres of water have been used.	Currently, Water meters are not installed in the campus to monitor the actual water consumption of water of the campus.
7.	Does your campus harvest rain water? (Please explain the method and uses)	Yes, Campus have rain water harvesting tanks. Stored water is used for gardening.
8.	Is there any water recycling System.	Yes, Bio diversity process for cleaning/processing of waste water, Then, treated water is use for gardening.

V - CLEAN AIR

1.	Are the Rooms in Campus are Well Ventilated?	Yes				
2.	Number of windows per room (aggregate value to be provided)	4 per room (Average)				
3.	What is the ownership of the vehicles used by your institute? (Please Tick ✓ only one)		Yes			
			Operator-owned vehicles			
		✓	Institute-owned vehicles			
			A combination of campus-owned and operator-owned vehicles			
4.	Provide details of institute-owned motorized vehicles?	Buses	Cars	Vans	Other	Total
	No. of vehicles	4	4	1	-	**9**
	No. of vehicles more than five years old	4	4	1	-	**9**
	No. of Air conditioned vehicles	0	4	-	-	**4**
	PUC done	✓	✓	✓	-	✓
5.	Specify the type of fuel used by your institute's vehicles:	Buses	Cars	Vans	Other	

	Diesel	✓	-	-	-
	Petrol	-	✓	-	-
	CNG	-	-	-	-
	LPG	-	-	-	-
	Electric	-	-	-	-
6.	Air Quality Monitoring Program (If Any)	No			
7.	Students suffer from respiratory ailments? (If Any)	No			
8.	Details of Diesel/Gas Generator. (Rating & Make)	Yes, DG sets of 82KVA, 50KVA and 25KVA are present.			

VI – ANIMAL WELFARE

1.	List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.) (if any)	Monkey, Peacock, Rabbit and Hyena
2.	How many dogs in your area have undergone Animal Birth Control - Anti Rabies (ABC - AR)?	No
3.	Does your campus have a Biodiversity Programme or a KARUNA CLUB?	Yes, Water Shedding for tree plantation drives and watering.

VII - ENVIRONMENTAL LEGISLATIVE COMPLIANCE

1.	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes

2.	Does your campus have any rules to protect the environment? List possible rules you could include.	Yes
3.	Does Environmental Ambient Air Quality Monitoring conducted by the Campus?	No
4.	Does Environmental Water and Wastewater Quality monitoring conducted by the Campus?	Yes, Campus have eat to right policy.
5.	Does stack monitoring of DG sets conducted by the Campus?	No
6.	Is any warning notice, letter issued by state government bodies?	No
7.	Does any Hazardous waste generated by the Campus? If yes explain its category and disposal method.	No
8.	Dose any Bio medical waste generated by the Campus? If yes explain its category and disposal method.	No

VIII - GENERAL

1.	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
2.	Does your campus have any rules to protect the environment? List possible rules you could include.	Yes Formation of Green Army Posters throughout the campus to protect environment. Flower Plucking
3.	What is the housekeeping schedule of garden and common areas in your campus?	1 09:30 AM to 10:00 AM Elaborate Cleaning. 2 1:00 PM to 01:20 PM Brief Cleaning. 3 04:30 PM to 04:50 PM Brief Cleaning.

4.	Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes. Students & faculties make sure waste goes to right place. Students and faculties refuse one-time-use plastic items.
5.	Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. celebrated in your Campus?	Yes
6.	Does Campus participated in National and Local Environmental Protection Movement?	Yes
7.	Does Campus has any Recognition/certification for environment friendliness?	Yes (Panchayat Appreciation)
8.	Does Campus using renewable energy?	Yes, Solar Energy.
9.	Does Institution conducts a green/environmental audit of its campus?	Yes
10.	Has the institution been audited/ accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	No

Recommendations

- Waste handling policy shall be prepared and followed.
- Equipments when not in use shall be switched off and should not run in standby modes or ideal.
- Use of push type taps
- Dual flushing toilet system for water conservation.
- Water Conservation Signage in Washrooms.
- Use of tap aerators.

Photographic Evidences

Plantation and Greenery

Green Campus

Potted Plants

Solar Power System

Water Tanks

Rainwater Harvesting Tank


GENERAL NOTICE BOARD


INFORMATION
SPANDAN


GURU GOBIND SINGH EDUCATIONAL SOCIETY'S TECHNICAL CAMPUS
CULTURAL FEST
ULLAS
2022

Cultural Programs

Eat Right Policy

Tree Plantation Drives

Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. Overall, a large are of campus is for landscaping. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for university campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. There are no major observations but recommendation is made in this report which would further strengthen the goal to achieve 100% environment friendly campus.

References

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

End of Report

Elion Technologies & Consulting Private Limited

Registered Office:
307, 3rd Floor, DDA Lal Market, H-Block
Vikas Puri, New Delhi, 110018
Phone No: 011-28541888, 9013890526
Email: support@elion.co.in
Website: www.elion.co.in