

PURBASTHALI COLLEGE
ESTD. 2009

REPORT OF
ENVIRONMENTAL
AUDIT/GREEN AUDIT
2022 - 2023

Prepared by
The Audit Committee
The University of Burdwan
Burdwan

Date: 23/12/2023

To
The Principal
Purbasthali College
Parulia
Purbasthali-II
Purba Bardhaman
West Bengal

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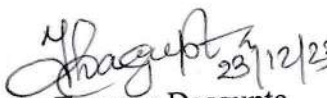
Subject: Environmental Audit Report Submission from Experts

Sir


After verification of all the aspects in the College and necessary assessment of the report on "Environmental/Green Audit" mentioning the "Energy Monitoring & Management System" submitted by your College for the period of 2022-'23, here, we are submitting the Audit Report of "Environmental/Green Audit" of your College of the period of 2022-'23 for your kind perusal in the attached sheet.

We request you to please acknowledge and oblige.


Yours,


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Dr Sibaprasad Rudra
Former Principal
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Principal (Former)
Vivekananda Mahavidyalaya
BURDWAN

Date: 23/12/2023


AUDIT REPORT ON ENVIRONMENTAL AUDIT/ GREEN AUDIT

CERTIFICATE


This is to certify that the Environmental Audit/Green Audit Report and Energy Monitoring & Management System followed at Purbasthali College, Purbasthali, Parulia, Block - Purbasthali-II, Purba Bardhaman based on the original data collected during the period of 2022-'23. This has been assessed and is applicable to provide quality ambience for continued Higher Education, Training and Mental health to the students for their smart future and career. Further, it is certified that the baseline data was prepared by internal College 'Green & Clean Campus Committee' team members of Purbasthali College and submitted to us. The content of the baseline data of the study and Energy Monitoring & Management System has been personally verified by the Expert Team constituted by the University of Burdwan, Burdwan for validity and reliability. The data used in the study are original in nature and have not been presented or published elsewhere. Data & Photographs used in the report are taken by the College Environmental Committee team members during preparing their Report of the concerned year 2022 - '23.


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Report of Environmental Audit/Green Audit**1.0 Introduction**

The Environmental Audit or Green Audit is a systematic identification, quantification, recording, reporting and analysis of the different components of environmental diversity. The 'Environmental Audit'/'Green Audit' aims to assess the various parameters involved in environmental practices in and around the HE Institutional campus, actually, it means to impress the congenial and environment-friendly atmosphere for the all stakeholders. It is formulated with an objective of looking after the practices performed by the authority within the institution, otherwise which may cause risk to the health of dwellers and the environment. Under the present format of AQAR and SSR Environmental Audit/Green audit is a mandatory parameter as per requirement of National Assessment and Accreditation Council (NAAC) which is a self-governing organization of India which declares the Institutional Grade.

2.0 Executive Summary

In accordance with the "Format of Green Audit: Questionnaire" of Purbasthali College, Purbasthali for 2022-'23, the Audit is performed on 23rd of December, 2023. Purbasthali College started on 2009 and came under the affiliation of the University of Burdwan. There are 7 UG Hons. and General Programmes are running. College is preparing for First Cycle of NAAC accreditation.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the Institution (17th Dec 2019). With this in mind, the specific objectives of the audit were to evaluate the adequacy of the management control framework of Environment Sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards.

The analysis was based upon a physical examination of the different sectors including labs *etc.*, 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 in the campus.

The methodology used included the physical inspection of the campus, review of the relevant documentation and interviews.

3.0 Statement of Assurance

This audit has been conducted in accordance with the report submitted by the College Environmental Committee, constituted on 30th of April 2018. On the basis of the

data and physical inspection audit procedure was 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.

4.0 Summary of Findings

The main findings of the audit as recorded are follows:

- In general, all the departments, faculty and students are to some extent aware about the need for environmental protection at a general level.
- It is observed that College has sent a proposal for installation of solar panel and the electricity generated to be distributed through power grid. There are four Solar street lamps in the college campus.
- It is also observed they are following some practices such as sock pits, maintaining greenery with some plants of medicinal values, introducing plastic free zone, *etc.*, are followed in the campus.
- All biodegradable and non-biodegradable wastes are safely disposed with the help of local Panchayat.
- On detailed review, it was observed that the college has already taken some measurements to implement the Green Policy (since 17th of December 2019) with applicable standards. In addition, College is taking care of to improve their efficiency, fairness and consistency.
- College one Rainwater harvesting tank which is used in gardening in the college campus as well as groundwater recharge purposes.
- They have prepared some nests to attract different types of birds (mainly Pigeon) in the fruit garden.

5.0 Suggestions

- College should follow the composition of Environmental Audit Committee, where Principal will act as Chairman and inclusion of student members from SEM I, III & V.
- College will maintain one Medicinal Garden properly.
- Proper training for maintaining Biodiversity Register be followed.
- Existing Composting Pit be managed properly.
- E-waste be disposed through proper/authorized License holder party; safe disposal methods should be adopted for other electrical wastes, printer cartridges *etc.*, through proper disposal methods.
- Formal MoU with Local Panchayat be maintained for long-term basis and periodical monitoring.
- College may maintain 'Green Budget' for the said purposes.
- Periodical maintenance of plants be followed.

B. Saha
Principal
Purbasthali College
Parulia, Purba Bardhaman.

GREEN AUDIT WORKING FORMAT

5.0 Audit Framework and detailed findings

The following audit framework is used for conducting Green Audit in 2022-2023. The framework also lists the findings and observations for every criterion.

Control objective	Control(s)	Audit Observation
Green initiatives	Maintenance of green environment	College has taken different initiatives to make aware among the stakeholders through different forms; College has conducted some activities for green environment through plantation
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	Reduce the absolute amount of waste that it produces from college staff offices.	The College is following the method to reduce 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 intends to prepare a composting pit for composting the all organic wastes, green wastes, etc., collected from gardens and canteen.
	Recycle or safely dispose of White goods, computers and electrical appliances.	Waste boxes of different colours are maintained for collection of decomposable and non-decomposable waste and finally wastes are safely disposed by local Panchayat.
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	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 is trying to dispose all the non-degradable materials as much as possible, avoid use of plastic; and all the wastes are collected in proper way and safely disposed through Panchayat.
	Promote reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives	Yes, the College has taken some initiative to reuse the biodegradable waste and recycling through training, posters and incentives.
	Dispose all waste, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment	Yes, the College disposes all wastes, whether solid or otherwise, and ensures that it is not released directly to the environment.
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.	Yes, the College has proposed to install solar grid power and the electricity generated to be contributed <i>via</i> power grid.

Control objective	Control(s)	Audit Observation
Green initiatives	Appreciate that it is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity	The College has no choice other than WBSEDCL.
	Look into the possibility of on-site micro-generation of renewable electricity.	College has installed a Green Generator for uninterrupted power supply
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College has furnished with LED as much as practicable.
Reduce energy consumption, especially of energy derived from fossil fuels	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	Considering the local climate heating system is not necessary. College follows paper-less communications using digital media; e-notice in 60% for academic/ administrative purposes.
	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 on' the appliances when not required.
	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.	The College is intended to follow the bests to put the main switch off when there is no need of electricity.
	Ensures that all electronic and electrical equipment such as computers, are switched off when not in use, and is generally configured in power saving mode when such option is available	It is practised.
	Laboratory space & status of equipment either running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment's on standby mode.	There is no Science Department.
	Purchase efficient and environmentally sound appliances in order to fulfill the commitments in section 2, and consider replacing old stock with 'greener, more efficient alternatives.	College has a positive attitude about increasing greenery by planting in front of the premises.
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.	This area is well-connected with bus and train services, so all of the members avail public transport.

Control objective	Control(s)	Audit Observation
Minimize the use of unsustainable transport	Reduce the proportion of travel on College business carried out in private transport and eliminate unnecessary and inefficient use of College vehicles.	No College vehicle.
	Promote car sharing I car pool among the students and faculty members	College does not promote car sharing/car pool among the students and faculty members.
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	Yes, College encourages the staff, students and conference guests for decrease in water usage.
	Use an efficient and hygienic water storage mechanism is to minimize the loss of water during storage	Yes, college has a hygienic water storage mechanism to minimize the loss of water during storage as stored.
	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 installed appropriate machinery for supplying the safe drinking water to all the stakeholders.
	Install Water recycling mechanism, such as rainwater harvesting system	<i>Rainwater harvesting system be improved.</i>
	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
	Minimize the use of fertilizers and pesticides in college grounds, opting for the use of compost produced on site- wherever possible	Organic fertilizers are used in the College. No pesticides are used.
	Dispose the chemical waste generated from the laboratories in a scientific manner	There is no chemical science Lab, so, no toxic chemicals wastes are generated.


 Principal
 Purbasthali College
 Parulia, Purba Bardhaman.

Control objective	Control(s)	Audit Observation
	Reduce the practice of burning plastic and other material that emits harmful gas on burning is prevented in the campus.	No such burning.
	Establish a Garden in the campus	College maintains green environment allround.
	Encourage the faculties and students to plant trees in the garden.	NSS and other students are taking part.
Ensure that environmental awareness workshops environmental	Conduct environmental awareness workshops as a part of the program.	College is going to form an Eco club for monitoring this.
	Conduct events such as plant trees to spread environmental awareness among the students	Few programmes have undertaken in this regard.
	Reduce the rate at which the College contributes to the depletion and degradation of natural resources.	College does not directly or indirectly participate 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	Compulsory ENVS paper of 100 marks in the University Syllabus for all the students of all streams to develop Environmental Awareness (80 written + 20 Project).
Ensure that the buildings conform to green standards.	Review architecture of existing buildings and reviews way, in consultation with experts, to reduce usage of energy for such buildings, offering greatest efficiency for energy and water usage, and reducing carbon emission	In general, all class rooms are big and spacious, well-ventilated. College has promoted for energy efficiency systems during face-lifting.
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	College has constituted the College Environmental Committee and functioning since 30 th of April 2018. Conducting regular meetings.
	Require that every staff and student member recognizes their responsibility to ensure that the commitments in the Environmental Policy are properly put into practice	College is trying to create awareness programmes to motivate the students.
	Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings	This Report is based on data of the session 2022-2023.

B. Saha

Principal
Purbasthali College
Parulia, Purba Bardhaman.

6.0 Recommendations

Considering the audit, following recommendations were made to the management.

Criteria	Recommendations
Publication of Audit Report	1. Resolutions of the "College Environmental Committee" along with audit report be published in the College website. 2. The College should go for ISO 9001:2015 Certification.
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	1. Advanced Composting system may be developed for bio-wastes. 2. College may go for partnership with Local Panchayat in monitoring of disposal of solid wastes through providing outreach program.
Reduce energy consumption, especially of energy derived from fossil fuels	1. Use eco-friendly lighting fully in and around the campus; outdoor lighting be managed and followed in the order of eco-friendly system. 2. Number of Energy and flow meters to be installed for monitoring of energy and water consumption building wise/department wise.
Maintenance of Campus and biodiversity	1. PUC (Pollution under control) certificate for all the vehicles entering the campus to be made mandatory and to be checked by security. 2. Students be aware on importance of Medicinal Gardens and PBR for different locations. 3. One Butterfly Garden may be started to maintain biodiversity within the campus. 4. Choice-plantation, fruit-plantation may be encouraged mostly considering the suitability of the region.
Proper maintenance of wastes	1. Total wastes including solid, liquid, etc., wastes be managed carefully.
Project-based learning on Environment related subjects	1. More number of environmental awareness campaigning be initiated for save environment programs.
Use of Rainwater harvesting system	1. It is recommended for fruitful use of Rainwater harvesting system.

7.0 Objectives and Scope

The purpose of this audit was to ensure that the Green Policy is followed and implemented in the campus, across all departments, administrative bodies and students.

8.0 Methodology

The methodology includes - preparation and filling up of questionnaire, screening of the report, physical interaction with the members in presence of Principal and the Members of the College Environmental Committee as well as Members of IQAC, record checking and review of the submitted documentations, interviewing key persons and data analysis, measurements and recommendations. It works on the several aspects of 'Green Audit' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.


Principal
Purbasthali College
Parulia, Purba Bardhaman.

a. In order to meet these objectives, this audit was based on report submitted by the College authority and reviewing of relevant documents as far as possible and interviews with authority, Coordinator and staff members physically.

b. Review of the Documentations

c. For the purpose of this audit the Green Policy of the institute was reviewed. Other relevant standards, Green audit framework *etc.*, was also considered.

Interviews

Interviews were conducted with the Principal, IQAC Coordinator, Coordinator of College Green & Clean Campus Committee and also members of the Committee.

Physical Inspection

Physical inspection was made on 23rd of December 2023 and report was prepared based on the physical verification and validation and interaction with the members of the College.

9.0 Declaration

I agree with all the recommendation and observations mentioned in this report.

Date: 23/12/2023

Place: Purbasthali College, Parulia



B. Saha

Signed by
College Principal with Seal

Principal
Purbasthali College
Parulia, Purba Bardhaman.

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23/12/23

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Sibaprasad Rudra
23/12/23

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Principal (for me)
Vivekananda Mahavidyalaya
BURDWAN