

THE GREEN AUDIT REPORT



MUGBERIA GANGADHAR MAHAVIDYALAYA

Academic session 2020-21



ACKNOWLEDGEMENT

Mugberia Gangadhar Mahavidyalaya conducts an internal audit for the campus environment whereby it aims to maintain the greenery and pollution-free environment. The initiative is still young and several other measures are still to be taken to ensure the concept of environmental sustainability.

The academic session of 2020- 2021 has seen a worldwide pandemic (which we are still fighting) that restricted our mobility which in turn had an impact on the green environment initiative of the campus. Due to the restriction and lockdown on the educational institutions, the managerial paperwork took some time. The field work of the audit had however been carried out sincerely before the pandemic stroked our country and report are submitted within the stipulated period. Sincere thanks to all for providing us necessary amenities and co-operation during the audit that helped in making the audit, a success.

THE AUDIT TEAM

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2.	Dr. Bidhan Samanta	HOD Chemistry, Coordinator research cell
3.	Dr. Goutam Barman	Assistant Professor, Bengali
4.	Irani Banerji Chatterjee	HOD Geography, Coordinator Green Campus
5.	Kingshuk Karan	HOD Education
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7.	Kousik Kr. Mondal	HOD Zoology
8.	Sougata Bera	Clerk and Secretary, Non Teaching Staff
9.	Subham Paria	General Secretary, Students Union

Audit Key Timeline

Field work completed	February 2020
Draft report completed and sent for management response	June 2020
Management (Principal) response received	August 2020
Final report completed	November 2020
Report presented to the Management	February 2021

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EXECUTIVE SUMMERY

1. Background:

In accordance with the Green Campus Evaluation Plan, as suggested by the Internal Quality Assessment Cell (IQAC) of the college, Mugberia Gangadhar Mahavidyalaya planned for conducting a green audit of the college in August, 2017 and set up a timeline for submitting an audit report to the Governing Body of the institution for approval. The audit is internal but essentially transparent and critical. After the field work and other formalities, the first audit report was finally send for approval to the authority (principal and IQAC) in August 2018.

2. Present Report (2020-21):

The present report making had however been a tough procedure due to the ongoing pandemic situation. The delay in publishing of the report had mainly been due to the health hazard of the audit team. The field works carried on inside the campus suffers no such delay as it was before this pandemic time. After much impediment, finally the audit report was published on March 2021 (that was supposed to be published within august).

3. The purpose:

The purpose of the audit was to make sure that the practices followed in the campus are healthy and environment friendly. With this in mind, the specific objectives of the audit were to evaluate the degree to which the Departments are in compliance with the applicable regulations, policies and standards and to ensure that the development of the college aims at sustainable development and green campus.

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

STATEMENT OF ASSURANCE

This audit is been conducted for the fourth time in the college. The audit procedure tried to meet the terms of International Standards of Internal Auditing.

In our decision, sufficient and appropriate audit procedures were completed and evidence gathered to support the precision 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.

SUMMARY OF FINDINGS

The main findings of the audit show that, in general, all the departments and students are aware about the need for environmental protection at a general level. The location of the campus at the rural environment had helped in empowering the students about the need of a sustainable campus. Maintenance of a garden, Vermicomposting, plantation of trees, maintenance of the water body, proper waste management measures, all these practices are followed inside the campus that contributed to the green audit report in a positive way.

However, on detailed review, it was observed that though the college had been implementing the Green Campus Policy for the last few years, some areas still need some deliberations to ensure sustainability. In addition, certain processes need to be implemented that could benefit from further review in order to improve their efficiency, fairness and consistency.

OBJECTIVE AND SCOPE

Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze environmental practices within and outside (not in our purview) 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. Later on, it is implemented as a measure to enhance a healthy environment to almost all the organizations. 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. 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.

The present Audit is conducted in view of assessing all necessary environmental components of Mugberia Gangadhar Mahavidyalaya, a college under the affiliation of Vidyasagar University, West Bengal.

ABOUT THE COLLEGE

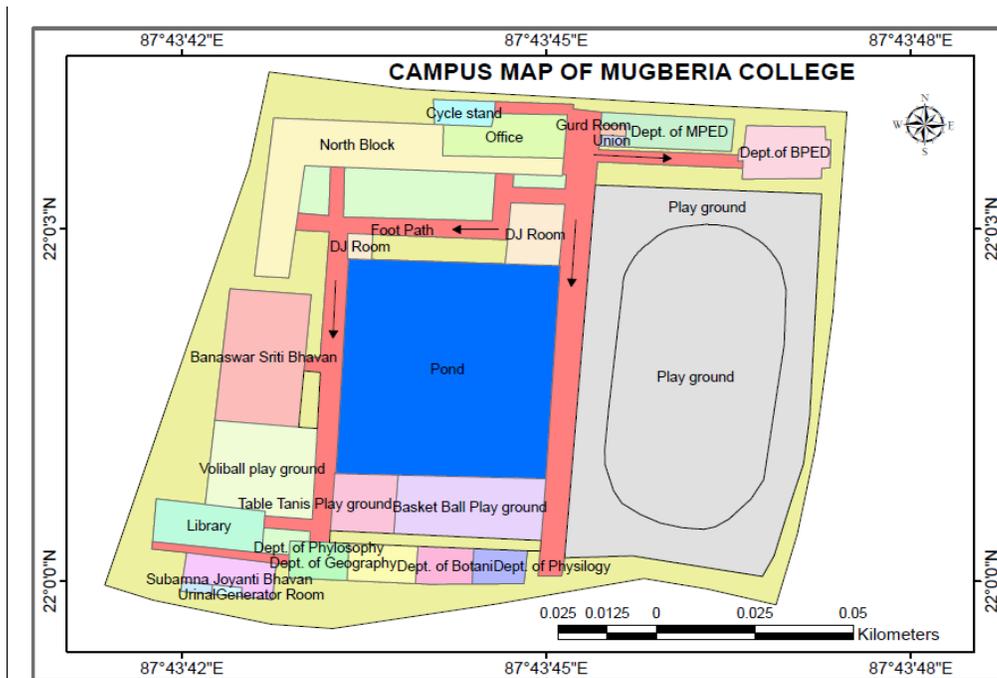
Mugberia Gangadhar Mahavidyalaya was established on 2nd of July, 1964 as a co-education college by a society of the same name in a village in Contai Subdivision of Purba Medinipur District (Erstwhile Midnapore District) after the name of Medinipur pride- Late Raisaheb Gangadhar Nanda - a great lover and patron of education. The college is situated in a culturally rich locale, and it is the only college in the vast area of Bhagwanpur-II block. It was founded with the help of the donations collected from the local people with the aim to serve the poor inhabitants of the area who were unable to send their wards to distant places for higher education. Gradually the college gained eminence, not only from Mugberia but also from faraway places.

Mugberia Gangadhar Mahavidyalaya, Bhupatinagar, Purba Medinipur, is a NAAC B+ Grade college (2019 assessment) and 50 years old college carrying out four streams of academic disciplines (Arts, Commerce, Science and Physical Education) along with several certificate courses. The college also has a Hotel Management discourse. This is a government aided UGC-approved and NCTE recognized college affiliated by the Vidyasagar University. The college is situated on a beautiful campus of 4.59 acres inside and 1.2 acres outside the college. The college building is located in a rural backdrop amidst lush green surroundings. The college has 7 academic buildings and 3 hostel buildings.

The college has an intention to adopt the 'Green Campus' system for environmental conservation and sustainability with prominent emphasis on reduction of CO₂ emission, energy and water usage. The college targets at creating an environmentally literate campus where students can learn the idea of protection of environment and stay healthy. The college administration is still working on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, carbon footprints and Alternative Energy.

THE COLLEGE:

	ATTRIBUTES	VARIABLES
COLLEGE AREA	CAMPUS AREA	4acre 59 decimal
	BUILT UP AREA	2acre 37 decimal
POPULATION	STUDENTS	2339
	TEACHERS	104
	NON TEACHING STAFFS	37



TOTAL CAMPUS AREA:
199940SQ FT

AUDIT GOALS OF THE COLLEGE

The college, with the advice of the Internal Quality Assessment Cell (IQAC) has set up an environmental quality assessment body (GREEN CAMPUS) that aimed at performing an internal green audit of the institution. The main objectives of the audit are:

- More efficient resource management
- To provide basis for improved sustainability
- To create a green campus
- To enable waste management through reduction of waste generation, solid- waste and water recycling
- Recognize the cost saving methods through waste minimizing and managing
- Point out the prevailing and forthcoming complications
- Impart environmental education through systematic environmental management approach and Benchmarking for environmental protection
- Financial savings through a reduction in resource use
- Enhancement of college profile

METHODOLOGY

The Green Audit taken up by the Mugberia Gangadhar Mahavidyalaya had been divided into three stages:

The Pre Audit Stage:

In the pre-audit stage, meetings provide an opportunity to support the capacity and objectives of the audit and enable discussions on the feasibility associated with the audit. The meeting provides the first opportunity to meet the audit and deal with several practical knowledge and concerns. The meeting provided the chance to gather information that the audit team can study before arriving on the site. The audit procedure and audit plan was handed over at this meeting and discussed in advance of the audit itself. In Mugberia Gangadhar Mahavidyalaya, the planning of audit processes was discussed in the pre-audit meeting. Audit team was also selected in this meeting with the help of staff and the college management. The audit protocol and audit plan were handed over at this meeting and discussed in advance of the audit itself.

The Management of the college has shown the commitment towards the green auditing during the pre-audit meeting. They were ready to encourage all green activities. It was decided to promote all activities that are environment friendly such as awareness programs on the environment, campus farming, planting more trees on the campus, etc., after the green auditing. The management of the college was willing to formulate policies based on green auditing report

The Audit Stage:

The Audit Stage encompasses of the team selection and the field works performed. Looking after the unique structure, location and ambiance of the

college, the Green Audit Team focused on Material Issues pertaining to college which have the highest influence on the Green Attributes of the College. The Audit stage also focused on the Methodology adopted. Checklist approach is adopted for transparent evaluation of the topics and increase readability for independent reader.

The Post Audit Stage:

The post-audit stage ensures formulation of Draft findings and sent to management response. Since the audit is done internally, it was important to ensure management approval for the draft. After getting draft approval, the audit team went for final report formulation.

AUDIT FRAMEWORK AND DETAILED FINDINGS

The following audit framework is used for conducting Green Audit in 2020-21. The framework also lists the findings and observations for every criterion.

Control objective	Control(s)	Audit Observation
WATER MANAGEMENT	Repair sources of water leakage, such as dripping taps.	Regular checking and maintenance of pipelines are done to control water wastage.
	Minimize wastage of water and use of electricity during water filtration process, if used, such as Aquaguard filter.	Yes, the college has aquaguard filters installed in all departments.
	Use an efficient and hygienic water storage mechanism to minimize the loss of water during storage	The college has a pond and reservoir to ensure emergency water use other than the submersible pump.
	Encourage to decrease excess water usage.	Though water is used nominal in the college, but to ensure a further minimal rate, placards and warnings are set up inside the college premise.
	Install water recycling mechanism.	Such mechanism is adopted which ensures that the rainwater gets deposited in the pond that is pumped through to ensure water in the toilets of the college buildings.
ENERGY MANAGEMENT	To look into preferable renewable sources of electricity purchase from an eco friendly company.	The college does not have any choice other than WBSEB for electric supply.
	To appreciate the purchase of electric devices and equipments those are eco friendly and sustainable.	The college also has 2 ecofriendly generators (Kirloskar Green) for the supply of emergency electricity to save our ecosystem.
	Look in to the possibility of on-site micro-generation of renewable electricity.	The college has set up two solar panels in the campus.

	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 lights as much as practicable.
	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	Yes, the college has put several posters and reminder notes in classrooms and other relevant places to turn off electric appliances when not in use.
	Monitor and understand the importance of different sources of college energy consumption.	The college tries to put the main switch off when there is no need of electricity.
	Ensures that all electronic and electrical equipments, such as computers, are switched off when not in use and is generally configured in power saving mode when and if such option is available	It is practiced.
GREEN CAMPUS	Establish a Garden in the campus	College already has a well maintained garden.
	Encourage the faculties and students to plant trees in the garden.	The college celebrates “Bana Mahotsab”, an annual tree plantation program in the campus where students and teachers plant trees in the campus in July.
	Minimize the use of fertilizers and pesticides in college grounds, opting for the use of vermi-compost produced on site wherever possible	Moderate amounts of bio-fertilizers are used in the college.
	Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic	Negligible amounts of washing liquids are used in the college and all the toilet cleaners are eco-friendly/organic.
	Dispose the chemical waste generated from the laboratories in a scientific manner	Non toxic chemicals are included in Vidyasagar University practical curriculum. Most of the waste generated is water-soluble and ultimately disposed through normal sewage system, diluted largely so the biomagnifications are negligible.

WASTE MANAGEMENT	Compost, or cause to be composted, all organic waste, green waste and non-recycled collected from kitchens, gardens, offices and rooms.	The college has set up a vermi compost plant that ensures proper treatment of all organic wastes.
	Recycle or safely dispose of dry wastes, computers and electrical appliances.	All dry wastes (paper, metal, glass, other dry waste, e-waste, etc.) are separated in different bins in the college and resell to the local vendor
	Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated	The college has set up separate bins to ensure proper segregation and collection of the various wastes. The responsibility of recyclable waste is however still not taken up the college.
	Make specific arrangements for events, such as community events, seminars and conferences in order to both arise consciousness among students and others and also to minimize the waste produced and maximize what is recycled/reused	The college organized several seminar and community program by the departments to ensure both consciousness and awareness among students and community members.
	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 waste, whether solid or otherwise, in a scientific manner. In order to ensure that the wastes released have no direct impact on the environment, the college looks through it.
	To recycle and reuse of kitchen wastes (from canteen and hostels) and garden waste	<p>Kitchen wastes and garden wastes commonly are recycled to form nutrient rich quality organic manure for the gardens inside the campus.</p> <p>The college uses the waste in vermin composting station which is used as not only inside the campus but is also distributed to the community.</p> <p>The college gives away the surplus of the bio wastes to the Self Help Group who in turn uses in vermin composting.</p>
CARBON FOOTPRINT	Ensure use of eco friendly transport option	About 90% of the students and teaching and non teaching staffs of the college use bicycle as the main mode of transport. The college also

		encourages transport by bicycle to students.
	Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service	UGC projects on sustainable development/ natural resources. Compulsory ENVS paper of 100 marks in the University Syllabus for all the students of all streams to develop Environmental Awareness (70 MCQ + 30 Project). Also, the college conducts vermin composting course that encourages students to practice environmental sustainability and community service with environmental friendliness.
	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.
	Create awareness of environmental sustainability and takes actions to ensure environmental sustainability.	Seminars and awareness programmes are conducted periodically on nature and natural resources.
	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.	New construction of the science building is in compliance with green standard.
	Conduct environmental awareness posters and seminars as a part of the programme.	Yes, the college places several posters and placards in the campus to ensure that environmental awareness is conducted. Also, seminars are organized on environmental theme in the college.

RECOMMENDATIONS

Criteria	Recommendation
Maximize the renewable flow energy to initiate healthy and continuous flow of energy	To set up solar panel in the college to ensure continuous renewable energy flow.
To channelize flow resource	To initiate rainwater harvesting by digging wells to accommodate rainwater flowing through the roof tops.
Maximize the proportion of waste that recycle & minimize the quantity of non-recyclable refuse	<ol style="list-style-type: none"> 1. Implement a mechanism to recycle plastic waste in a scientific manner. 2. To implement measures to recycle dry wastes
Reduce energy consumption, especially of energy derived from fossil fuels	<p>All the areas of the campus should be under the preview of solar renewable power control.</p> <p>Also, switch off drills are to be set up in the campus to ensure all the electric devices to be in power off measure.</p>
Minimize the use of chemical pollutants	The chemical pollutants from the chemical laboratories are water soluble. So, it is recommended that this water is recycled properly.



Bon Mahostob to encourage planting trees



The dependency on bicycle shows less pollution



Waste Management Program



Distribution of plants to students



Students taking initiative to protect greenery in campus



Use of green generator to have less pollution.



The departmental garden



The water tap for students use



The waterbody that not only adds to the green campus, but also provides a good ecosystem inside the campus

DECLARATION

I agree with all the observation and recommendation of the report.


Principal
Mugberia Gangadhar Mahavidyalaya

Original signature of the principal with seal

