

	<p>Green (ENVIRONMENTAL) and Energy Audit Report FOR Mahila Arts College, Motipura</p>	
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**GLOBAL ACADEMIC  
ASSESSMENT CONSORTIUM**  
"Academic Assessment Towards Excellence"



**GREEN (ENVIRONMENTAL)**  
**and**  
**Energy**  
**AUDIT REPORT**

For

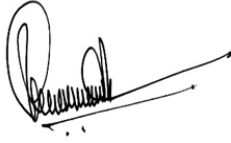
Mahila Arts  
College, Motipura, Himatnagar

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**To whomsoever it may concern**

This is to certify that Global Academic Assessment Consortium has conducted detailed "Green (Environmental) Audit" of Mahila Arts College for the academic year 2022-23 on 15.12.2022. The Green Audit was conducted in accordance with government regulations. The audit covers the parameter such as water, wastewater, air quality, biodiversity assessment, noise, energy management, health and wellbeing. The recommendations are suggested to implement environment management plan which the institution can follow to minimize the impact on Institutional framework. In our opinion and to the best of information provided to us, set green audit gives the true and fair view in conformity with the auditing principles accepting in India



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## **SUMMARY**

M/s Global Academic Assessment Consortium (GAAC) Green (Environmental) Audit Team was engaged in performing Green (Environmental) and Energy Audit for Mahila Arts College, Motipura, Himatnagar, Gujarat 15<sup>th</sup> December 2022.

Green (Environmental) and Energy Audit was conducted in an interactive manner with the management and employees of the college and based on the reviewed documentation, site visits, other evidence and data generated by observations were drawn. The Green (Environmental) and Energy audit was carried out with the scope for assessing land use, green coverage and biodiversity, energy management, waste management, energy conservation practices and use of renewable energy sources.

Objective of the audit covered the GAP's associated with the implementation of environmental compliance and other relevant systems within the facility.

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## ACKNOWLEDGEMENT

**Global Academic Assessment Consortium (GAAC)** appreciates and expresses sincere thanks to the Management and Employees of **Mahila Arts College, Motipura** for their help without which the “Green (Environmental) and Energy Audit” could not have been possible. The courtesy extended to our Audit Team is highly appreciated.

The audit team were assisted and guided by the personnel of college during the audit. Following were the key coordinating personnel from **Mahila Arts College, Motipura**.

1. Dr. K L Patel Coordinator (Principal)
  2. Dr. P H Patel (Senior Faculty)
  3. Dr. A S Patel (Senior Faculty)
  4. Dr. Y H Patel (Senior Faculty)
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## **PREAMBLE**

Global environmental issues are ever increasing with excess utilization of natural resources by humans. In order to overcome environmental challenges, it is necessary to adopt sustainable environmental practices to minimize the negative impacts of the various campus operations on the environment. **Mahila Arts College, Motipura** is spread across 2.65 acres of land with sustainable environmental practices adopted for optimum utilization of natural resources.

**Mahila Arts College** aspires to play a crucial role in protecting the environment in all respects through outreach and partnering with wider community in developing a sustainable future. In accordance with this broad vision focusing on developing practices for societal good, the **Mahila Arts College** has developed Environment Sustainability, Green Campus Policy, Waste Management Policy which affirm its commitment to recognizing environment and sustainability related issues at campuses and demonstrates its intention to address those issues through continual improvement in developing sound environmental policies and safe operational and sustainable practices. As a part of **Mahila Arts College** Environmental Policies, the college offers programs and courses on Environment aimed at raising environmental consciousness at Undergraduate. The college runs a paper on Environment since 2012. The policies strive to develop periodic assessments of the various resources being utilized at **Mahila Arts College** by measuring its environmental footprint with regard to key natural resources like energy, water, land use and buildings, solid waste management etc.

**Mahila Arts College, Motipura** has adopted strategies for waste, water, energy conservation and management. The wet waste is collected by Himatnagar Nagarpalika. There are policies adopted for recycling of plastic, paper and cardboards. There are policies and guidelines for management of solid waste, single use plastic and hazardous waste, E-waste, etc.

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Renewable energy sources are harnessed to fulfill the energy requirements of the campus. Energy conservation is given priority within the campus. Solar energy is utilized for road lights. For efficient energy utilization the college have 80 % LED lights installed at the campus to decrease the conventional energy consumption.

Importance of water conservation is recognized, and steps are taken to minimize the water consumption by recycling and economical usage. **Mahila Arts College** have rain harvesting mechanisms installed for recharging the underground water levels. Also, regular monitoring of waterconsumption is done to ensure economic water usage.

The aesthetics of the campus is maintained by planting ornamental, annual, biennial and perennial plants indoor and outdoor. Inventory of all the plants with their botanical names is maintained and updated regularly. College campus has a biodiversity cell to study, collect data and document all biodiversity conservation related matters in 2.65 acres of campus and surrounding areas. The college has conducted several tree plantations drives to enhance the biodiversity value of the region. The college encourages students and staff members to travel by the buses provided and minimize the use of personal vehicles to decrease the air pollution and noise pollution.

## OBSERVATIONS

### DEFINITIONS

#### **Environment Management System**

The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.

#### **Environmental Impact**

Any change to the environment, whether adverse or beneficial, wholly, or partially resulting from an organizations activity, products or services.

#### **Green (Environmental) Audit**

Green (Environmental) Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity.

#### **Air Quality**

Air quality is the degree to which air is suitable enough for humans, animals, or plants to remain healthy

#### **Noise Pollution**

Noise pollution is generally defined as regular exposure to elevated sound levels that may lead to adverse effects in humans or other living organisms

#### **Water Audit**

Water Audit is a qualitative and quantitative analysis of water consumption to identify means of reducing, reusing and recycling of water.

#### **Solid Waste Management**

Solid Waste Management is a term that is used to refer to the process of collecting and treating solid wastes

#### **Energy Audit**

An energy audit is an inspection survey and an analysis of energy flows for energy conservation in a building.

## i. INTRODUCTION

Green (Environmental) and Energy Audit is a review for management of resources in a way that along with necessary utilization of resources the environment is protected and conserved. The audit also recommends various standard parameters, methods and projects for environmental protection. Green (Environmental) Audit aims at detecting and monitoring the sources of environmental pollution in the campuses and its surrounding. It helps the college to implement the ways to manage waste, energy consumption and water.

As per National Environment Policy 2006, Green (Environmental) Audit is mandatory to each institution. It is recognized that the maintenance of the healthy environment is not the responsibility of the state alone, but it is the responsibility of every citizen and thus a spirit of partnership is to be realized through the environment management of the country. NAAC (National Assessment and Accreditation Council), an autonomous body under UGC (University Grants Commission) has added the concept of environmental audit in accreditation methodologies of universities and colleges.

## INSTITUTIONAL BRIEF DESCRIPTION

**Mahila Arts College, Motipura** carries forward the legacy of Vishvamangalam Kelavani Mandal initiative towards the cause of quality education began in 1987 with the establishment of a primary school and today after four decades of its existence it has 22 institutions. Vishvamangalam Kelavani Mandal was established as a charitable trust under the Bombay Act, in furtherance of the objective of the Vishvamangalam Kelavani Mandal to reach out to a greater number of stakeholders in North Gujarat. The college aims to emerge as a leading educational institution that disseminates knowledge upholding the highest standards of instruction in all fields of study. Along with academic excellence and skills, the college curriculum is developed in a manner to impart experiential learning & life-skills, and, ensures that learners are exposed to various activities, which instill in them social sensitivity, compassion, patriotism, moral, and ethical integrity. Accordingly, when the learners graduate, they merge as citizens who are best suited to serve society and also undertake various leadership duties.

It is a multidisciplinary campus with all the privileges and pride to exist and expand as a world-class educational institution. College is developed in sylvan surroundings. The college campus is spread over 2.65 acres of land and has a well-designed architectural layout. Students from over twenty-five different villages of sabarkantha and various parts of the city study here. At present, the college is offering one programme. The campus is well-equipped with a state-of-the-art infrastructure, laboratories, sports, transport and other educational & recreational facilities. Hostel facility is provided inside college campus for students (Boys and Girls).

The hostels with the state-of-the-art infrastructure provide an ambience of home away from home. The hostels are spacious and well-furnished with attached bathrooms. The hostels are supported by spacious mess where staff and students dine together.

## **ii. OBJECTIVE**

The objective is to conduct Green (Environmental) and Energy Audit by inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants, the environment. Also, to secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use on the campus.

## **iii. SCOPE OF THE AUDIT**

The scope of the Green (Environmental) and Energy Audit extended to:

Carry out on-site assessment at **Mahila Arts College, Motipura**

#### iv. METHODOLOGY

In order to perform Green (Environmental) and Energy Audit, the methodology includes different tools such as preparation of checklist for physical inspection and document review of the campus, observation, appraisal of the documentation, data analysis, measurements and recommendations.

Following are the different sections within the campus assessed for Green (Environmental) Audit-

- **Land and Soil Environment (Biodiversity)**

Human activities for development and sustenance are the main cause of biodiversity loss. Habitat loss is the significant effect of human interference in ecosystem balance caused by urbanization and overexploitation of resources which further leads to loss of species. In this section the assessment is conducted to note the extent of harm (or risk of harm) posed to the biodiversity by various human activities and campus operations. With respect to Land and Soil environment (biodiversity), a compliance assessment is conducted to review the adherence to enacted legislations by local and central governing authorities for environment protection and commitment of the campus operations for betterment of the environment.

- **Air Quality**

In air quality assessment the data about sources and extent of air pollution in the campus is studied. The existing internal policies and initiatives for the control of air pollution by the campus administration and its implementation is reviewed based on physical observation and document verification. Adequacy of infrastructure to control air pollution in the premises is examined.

- **Water Management**

In assessment of water management strategies of the campus the sources of water and its utilization in the campus is studied. The various initiatives for reducing water usage are examined and the awareness measures for water conservation were observed.

- **Noise**

The noise assessment details are checked to ascertain the effect of noise on the campus environment. The Noise Pollution (Regulation and Control) Rules – 2000 and GRIHA Green Building Manual are considered for deciding the audit parameters for noise criterion.

- **Waste Management**

The segregation of waste at the source and its disposal is assessed. The internal policies of waste management and its implementation is reviewed. Also, the initiatives for recycling the waste and awareness for proper disposal of waste are checked.

- **Energy Management**

The sources of energy and utilization of renewable energy sources is observed. The energy consumption details of the campus are assessed. The infrastructure for energy conservation and the awareness initiatives for energy conservation are checked. Internal policies for energy management are studied and its implementation is observed.

- **Well-being and social aspects**

The initiatives for well-being of students and staff at the campus are examined. The various campaigns for societal development are checked.

v. ASSESSMENT REPORT OF Mahila Arts College, Motipura

TABLE 1

S. NO	DESCRIPTION	OBSERVATIONS
1	<b>Land and Soil Environment (Biodiversity)</b>	The campus has flora and fauna with their biodiversity details listed within and around the campus
2	<b>Air Quality</b>	Bi-cycles are used within the campus
		Motorized vehicles are restricted within the campus. The students and staffs are encouraged to travel by the buses provided by the college
		Ambient Air quality and stack monitoring is conducted on regular basis.
3	<b>Water Management</b>	The rainwater harvesting is available in campus.
		The campus has RO's connected to water coolers which are under AMC. The water quality is assessed at every month
4	<b>Noise</b>	Noise monitoring is conducted within the campus
5	<b>Waste Management</b>	Biodegradable waste generated from the canteen/ mess is taken away by shepherds for cows.
		E-waste and biomedical waste are disposed through registered vendor
6	<b>Energy Management</b>	The campus has LED lights at all the locations which were assessed
		The Street lights are used through Solar.
7	<b>Well Being and Social Aspects</b>	Healthcare facility is available in the campus.
		Tree plantation drives were conducted
		Active MOU is in place with different NGOs for online counselling health and well-being of students, faculty and staff.

## vi. REFERENCES

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## 1. Flora in the Campus

### મહિલા આર્ટ્સ કોલેજ, વિધાનગરી (હિંમતનગર)



વિશ્વ પર્યાવરણ દિવસની ઉજવણી... 

તારીખ: ૫/૬/૨૦૨૨



