

ENVIRONMENT AUDIT

STUDY PERIOD (ONE YEAR) 2024 - 2025

Sustainability study

AUDIT REPORT

Studied for

Maulana Azad Education Society's

Marathwada College of Education

Dr. Rafiq Zakaria Campus, Dr. Rafiq Zakaria Marg,

Post Box No. 117, Harsul Road, Rauza Baugh,

Aurangabad – 431001 (MS), India

Studied in the capacity of

Accredited and Certified

Green Building Professional



Studied by

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Disclaimer

The study has been prepared for **Maulana Azad Education Society's Marathwada College of Education** located at Dr. Rafiq Zakaria Campus, Dr. Rafiq Zakaria Marg, Post Box No. 117, Harsul Road, Rauza Baugh, Aurangabad – 431001 (MS), India based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the internal team. The warranty or undertaking, expressed or implied is made and no responsibility is accepted in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

It is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This should not be copied or regenerated in any form.

Ar. Nahida Abdul
Greenvio Solutions



Acknowledgement

Appreciation extended to **Maulana Azad Education Society's Marathwada College of Education, Maharashtra** for assigning this important work of Environment Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to everyone from the Management.

We are also thankful to Institute's Task force who have played a major role in data collection.

CONFIDENTIAL

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1. Introduction

1.1 About the Institution

1.1.1 Vision

The Institute strives "To be the Centre of Excellence by providing world class 'Teacher Education' to students from all sections of the socitey."

1.1.2 Mission

The Institute's adheres:

- Envisages to impart quality training with commitment to excellence.
- Endorses to impart value added education with efficient and competent man power, excellent infrastructure and innovation in teacher training and research programmes in order to generate globally competitive and skilled teachers, researchers and torough prfessionals.

2. Overview

2.1 Summarised Populace analysis for 2024-25

2.1.1 Students data

The data (shared by Institute) shows there were 161 male; 333 female.
Thus 494 students.

2.1.2 Staff data

Sl. No.	Particulars	Male	Female	Total
1	Admin staff	5	0	5
2	Teaching staff	10	8	18
3	Non-Teaching staff	8	1	9
Total		23	09	32

Table 1: Staff data of the Institution

Above data documents 32 staff members.

Thus, total populace stands at 526 nos.

3. Observation

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Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO IA (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: ☒ Green audit ☐ Energy audit ☐ Environment audit

Institute: Marathwada College of Education Date: 17-05-202
CSN

Document objective: Inferences of the Site visit

Observations (Positive aspects)	Suggestions (Improvement aspects)
Green Audit	
- Documentation of water facilities with maintenance information	- Dedicate following zones with documentation - Orange zone
Energy Audit	
- 20 Nos. of solar panels available on rooftop of building & maintained - Fire safety measures undertaken.	- Dedicate following zones with documentation - Green Energy zone - Danger zone
Environment Audit	
- Environmental study reflects good atmosphere - Flora is available in sufficient nos.	- Dedicate following zones with documentation - Green zone - Rooftop zone

Signature & round seal
Name:
Designation:

Signature & round seal
Name: Mrs. Shalini
Designation: Project Coordinator
For The Greenvio Solutions

Plate 1: Evidence files related to inferences

4. Investigation

The following results were carried out during visit on **17 May 2025**.

This study is the combined study of all the micro-studies taken place in previous section to draw a specific conclusion of overall AQI. The key parameters include:

- ➡ Month of testing – May
- ➡ Season of testing – As per IMD – Considered Summer or pre-monsoon

Note: All the following tests are done in outdoor areas of premises.

S. No.	Time	Location	AQI result	AQI category as per IMD	Requires improvement
1.	10:59	Building 1 – Terrace	56	51-100 Satisfactory	No
2.	11:24	Building 2 – Ground floor	56	51-100 Satisfactory	No

Table 2: Macro level study of the site – AQI parameters

Note: The software used considers only AQI below 50 as Fair and better. *The above study was conducted using*

the HuaFeng Accuweather software. However, AQI Caegory is denoted as per Standard for Operating Procedure

– IMD – Minstry of Earth Sciences, Govt. of India 2021.

5. Documentation

5.1 Ecological audit

There has been excellent ecological upgradation; open spaces and green spaces are documented below:



Plate 2: Ecological cover in premises

5.2 Biodiversity audit

Publication of flora and fauna has been prepared by Internal Team and it was informed it is same as last study.



Plate 3: Green cover around the premises

5.3 Carbon Footprint Audit - Heat Island Reduction

5.3. Light pollution study

This type of pollution is not experienced within premises

5.3.2 Heat Island Reduction

The heat island effect refers to the study of micro climatic feature within a site. The following features help maintain the internal micro-climate as cool:

- ➡ Light colored facades
- ➡ Green pockets within premises

5.4 Noise Audit

This study is conducted within site premises.

S. No.	Time	Location	Actual Noise (dB)	Max. Noise (dB) as per norms	Requires improvement
1.	10:59	Building 1 – Terrace	62.6	50	Not really because vehicles are restricted within premises
2.	11:24	Building 2 – Ground floor	57.8	50	

Table 3: Summary study of the noise

The above study was conducted using the NoiseCapture software.

As the above study shows the sampling carried following are major observations:

- ➡ No changes required at present on an immediate basis

6. Compliance

The compliance study was carried out through investigative ways. This was done to understand extent of implementations based on previous reports.

- ➔ Original report study was for 2021-22 and 2022-23
- ➔ Renewal study currently done is one academic year starting June 2024

6.1 Compliance status in form of Action taken report

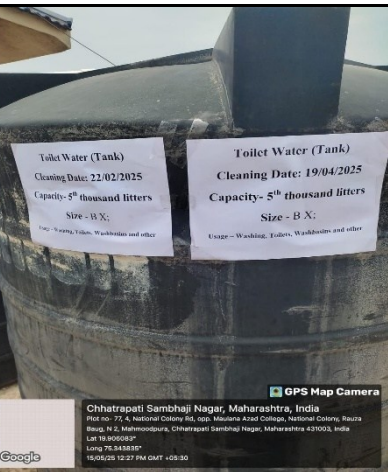
The inputs are noted next page onwards.

ACTION TAKEN REPORT

(Green/ Energy/ Environment) AUDIT

S. No.	Recommendation	Page nos. of Report	Action taken (Implemented/ Under process/ Steps to be taken)	Evidence (Geo tag photo or other)
1.	Use of LED Lights	Energy Audit-Pg.no .08	WE have installed LED lights in all the classrooms, staff rooms, office, Library etc. The photos are attached	
2.	Electronic waste	Environment-al audit	We have installed the electronic waste box in the Internship school	
3.	Water Conservation		Students daily upload saving of water on YEWS APP	
4.	Use of Separate Dustbins	Environment Audit Pg no.09	We have put dustbins of plastic and dry garbage separately in corridors	

5.	No vehicle Zone	Environment Audit pg.no 15	The notices are released from time to time to notify the students not to park the vehicles in 'No Vehicle zone'	
6	Bird feeder Installation	Green audit	The campus is made ecofriendly for different birds found in the campus	
7.	Fire Zone	pg.no. 14	Fire zone banners related with fire safety and precaution was hanged at building entrance area	
8.	Composting	pg.no. 09	The students were taught to use dried leaves of campus trees and use it for composting purpose	
9.	Workshop on Sustainable Shopping Habit	Environmental Audit	The students were asked to prepare cloth bags for shopping of vegetables, avoiding the use of plastic bags	
10.	Trash to treasure	Environmental audit pg.no 09	The waste materials were used for making the useful products, and students were involved in it.	

11	Water Conservation	pg.no.08	The students were asked to download YEWS APP of Maharashtra Govt. and upload daily the savings of water on it.	 Chhatrapati Sambhaji Nagar, Maharashtra, India N12-8-27-43, Raure Baug, N 2, Cidco, Chhatrapati Sambhaji Nagar, Maharashtra 431003, India Lat 19.906678° Long 75.344133° 17/01/2025 01:21 PM GMT +05:30
12	Plant 4 Mother	Green Audit	The student were asked to plant one Tree and save the Mother Land	 Chhatrapati Sambhajnagar (Aurangabad), Maharashtra, India N12-8-27-43, Raure Baug, N 2, Cidco, Chhatrapati Sambhajnagar (Aurangabad), Maharashtra 431003, India Lat 19.906678° Long 75.344133° 16/01/24 12:28 PM GMT +05:30
13	Medicinal Plantation	Environmental audit ,pg.no 08	The plantation of trees was done For sustaining and maintaining Eco Friendly environment	 Aurangabad, Maharashtra, India V8Q9+8MM, Navkhanda, Aurangabad, Maharashtra 431001, India Lat 19.888189° Long 75.319801° 10/09/24 12:18 PM GMT +05:30
14	Cleaning of Water tank	Pg.no.08	The details of Water capacity, The Water tank was cleaning date was mentioned on water tank	 Chhatrapati Sambhaji Nagar, Maharashtra, India Plot No- 75.4, National Colony Rd, opp. Maulana Azad College, National Colony, Raure Baug, N 2, Maharashtra, Chhatrapati Sambhaji Nagar, Maharashtra 431003, India Lat 19.906678° Long 75.344133° 16/01/25 12:23 PM GMT +05:30
				 Chhatrapati Sambhaji Nagar, Maharashtra, India Plot No- 75.4, National Colony Rd, opp. Maulana Azad College, National Colony, Raure Baug, N 2, Maharashtra, Chhatrapati Sambhaji Nagar, Maharashtra 431003, India Lat 19.906678° Long 75.344133° 16/01/25 12:27 PM GMT +05:30

7. Suggestion

The suggestion (inference) would act as a 'PLAN OF ACTION' to implement all the suggestions in a detailed manner.

- ➔ Conduct the 'Before' and 'After' study with photos
- ➔ Document the same in 'Action taken report'

S. No.	Aspect with evidence if any	Suggestion
1.	Biodiversity aspect Aspect area: Numbering the plantations in the premises	Make a list of all the plantations in the premises and start numbering the plantations in either of the ways: 1. Paint the nos. on iron plates and nail the same 2. Print nos. on paper, laminate and paste the same 3. Paint the nos. directly Sample image for 3 examples are noted below.    <i>Options for numbering the plantations</i> Care should be taken that the display should be visible. Uniform color palette should be identified and used. Measures should be taken to avoid withering during monsoon. This could be undertaken as a student activity.
2.	General Aspect area: Demark & display board about zones	Introduce display board and signboard about: ➔ Green zone ➔ Cooltop zone

3.	Carbon footprint aspect Aspect area: Cool rooftops	Terrace rooftops can be painted with Cooltop (Reflective material) to reflect the harsh sunrays and reduce the heat absorption in the top most floor and surrounding areas of the building. Introduce signboards about 'No students are allowed to enter' Undertake feasibility study of before - after temperature reading. <i>Cool roof comparative analysis (For reference purpose only)</i> Source: Image by https://www.gaf.com/en-us/blog/six-truths-about-cool-roofs-281474980105387
4.	Noise aspect Aspect area: Demark & display board about Silent zone	A signboard highlighting and 'No honking or Silent zone' should be displayed outside campus near all entrance gates; near roadside approach of site (Outdoor areas) and 'Quite zone' outside the library space (Indoor areas)

5.	Site aspect <u>Aspect area:</u> Site map	Introduce campus map near entrance of site 
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Table 4: Observation based suggestion study of the campus

8. Compilation

The study is based on the data collected, analyzed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyze and study the data collected.

National references

- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013

International references

- ➔ The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- ➔ Streetscape elements – Chapter 6 on San Francisco
- ➔ American lung association <https://www.lung.org/>
- ➔ Study related to air pollution <https://www.airgle.com/>
- ➔ Exploring the light pollution <https://education.nationalgeographic.org/>
- ➔ Urban heat island effect <https://www.epa.gov/heat-islands/what-you-can-do-reduce-heat-islands>

