

ENVIRONMENT AUDIT

STUDY PERIOD (TWO YEARS) 2021 – 2022 & 2022 - 2023

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



Disclaimer

The Audit Team has prepared this report for the **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.

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Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

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Acknowledgement

The Audit Assessment Team thanks the **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 due to **everyone from the Management.**

Our heartfelt thanks to the Chairperson of the entire process **Prof. Naveed Us Sahar,** Principal for the valuable inputs.

We are also thankful to **College's Task force the faculty members** who have collected data required and special mention to **Ms. Zeenat Khan (Faculty Member).**

We highly appreciate the assistance of the **entire Teaching, Non-teaching and Admin staff** for their support while collecting the data.

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1. Introduction

1.1 About the Institution

1.1.1 Vision

"Marathwada college of Education has always strived to be the Centre of Excellence by providing world classs 'Teacher Education' to students from all sections of the socitey."

1.1.2 Mission

"Marathwada College of Education envisages to impart quality training with commitment to excellence. The college 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 prfessionsl."

1.1.3 Objectives

The objective of the Institute are:

- ➔ *To train and develop integrated and effective teachers with the highest level of excellence.*
- ➔ *To organize advanced studies and promote research in educaiton.*
- ➔ *To provide sultural, secular and ethical values and faster in student the spirit of Nationa integration.*
- ➔ *To achieve the object of secularism by promoting literacy and wisdom among studnt to carry out social services through extensive activities and hence pave the way for self empowerment and develop dignity of labour.*
- ➔ *To inculcate innovation and research aptitude amont prospective teachers and brig them into the new realm of education technology.*

1.2 Assessment of the Institute

1.2.1 Affiliation

The College is affiliated with the **Dr. Babasaheb Ambedkar Marathwada University**, a public university in Aurangabad, Maharashtra.

1.2.2 Certification

- **All India Survey of Higher Education** (AISHE) code is C-34619.
- National Council for Teacher Education, New Delhi

1.2.3 Recognitions

The courses provided by the Institute received recognition by the **section 2(f) and 12 (B) of the University Grants Council Act, 1956.**

2. Overview

2.1 Summarised Populace analysis

2.1.1 Research study for 2022-2023

Students data

The data (shared by the Institute) shows there were **591 students**.

Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	05	00	05
2	Teaching staff	10	08	18
3	Non-Teaching staff	08	01	09
Total Staff Members		23	09	32

Table 1: Staff data of the Institution for 2022-2023

The staff data shows the College premises had **32 Staff Members**.

2.1.2 Research study for 2021-2022

Students data

The data (shared by the Institute) shows there were **593 students**.

Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	05	00	05
2	Teaching staff	10	08	18
3	Non-Teaching staff	08	01	09
Total Staff Members		23	09	32

Table 2: Staff data of the Institution for 2021-2022

The staff data shows the College premises had **32 Staff Members**.

3. Research

3.1 About the Green Building Study Audit

It is a systematic study of the aspects which make the Institution sustainable and healthy premises for its inhabitants.

3.2 Analysis of the Green Building Study Audit

The procedure included detailed verification as follows:

- ➔ Investigation
- ➔ Technical
- ➔ Observations
- ➔ Inferences

3.3 Strategy adopted for Green Building Study Audit

The strategies included data collection from the admin department, actual inventory, investigation to check the operation and maintenance, analysis of the data collection, and preparation of the Report.

4. Investigation



Plate 1: Induction and exit meeting with the team

5. Documentation

5.1 Natural Plantations (Green cover)

S. No.	Plant name	Type	Nos.	Planted by
1	<i>Raat Rani</i>	Shrub	5	Planted by staff,
2	<i>Reetha</i>	Tree	8	Grown naturally
3	<i>Jamun</i>	Tree	10	Grown naturally
4	<i>Palas</i>	Tree	10	Planted by staff,
5	<i>Sandal</i>	Tree	40	Planted by students
6	<i>Banyan</i>	Tree	5	Grown naturally
7	<i>Kaner</i>	Shrub	12	Planted by staff,
8	<i>Satvin/Shaitan Ka Jhar/Devil Tree</i>	Tree	15	Planted by staff,
9	<i>Emli</i>	Tree	20	Grown naturally
10	<i>Jaswant</i>	Shrub	100	Planted by students
11	<i>Mango</i>	Tree	29	Grown naturally
12	<i>Neelgiri</i>	Tree	20	Grown naturally
13	<i>Babul</i>	Tree	20	Grown naturally
14	<i>Sadabahar</i>	Herb	100	Grown naturally
15	<i>Neem</i>	Tree	30	Grown naturally
16	<i>Anar</i>	Shrub	25	Planted by students
17	<i>Cotton</i>	Shrub	25	Planted by students
18	<i>Coconut</i>	Tree	50	Planted by students
19	<i>Teak</i>	Tree	10	Planted by staff,
20	<i>Sessum</i>	Tree	10	Planted by staff,
21	<i>Adulsa</i>	Tree	6	Planted by students
22	<i>Bamboo</i>	Tree	12	Planted by students
23	<i>Touch Me Not</i>	Herb	15	Planted by students
24	<i>Bottle Brush</i>	Tree	15	Planted by students
25	<i>Apta</i>	Shrub	12	Planted by students
26	<i>Vilayti Babul</i>	Tree	12	Planted by students
27	<i>Gulmohar</i>	Tree	10	Grown naturally
28	<i>Cactus(Without Spine)</i>	Shrub	40	Planted by students
29	<i>Cactus(With Spine)</i>	Shrub	20	Planted by students

30	<i>Mogra</i>	Shrub	50	Planted by students
31	<i>Chameli</i>	Shrub	20	Planted by students
32	<i>Swastik</i>	Shrub	12	Planted by students
33	<i>Ashoka</i>	Tree	30	Planted by staff,
34	<i>Badam</i>	Tree	30	Planted by staff,
35	<i>Ber</i>	Tree	5	Grown naturally
36	<i>Rue</i>	Shrub	5	Grown naturally
37	<i>Idlimbu</i>	Shrub	5	Grown naturally
38	<i>Limbu</i>	Shrub	6	Grown naturally
39	<i>Gymnosperm</i>	Shrub	6	Grown naturally
40	<i>Peepal</i>	Tree	5	Grown naturally
41	<i>Tarvat</i>	Tree	5	Grown naturally
42	<i>Amber</i>	Tree	5	Grown naturally
43	<i>Kadipatta</i>	Shrub	5	Planted by staff
44	<i>Shatavari</i>	Shrub	19	Planted by staff
45	<i>Croton</i>	Shrub	20	Planted by students
46	<i>Gulab</i>	Shrub	50	Planted by students
47	<i>Kavit</i>	Tree	2	Grown naturally
48	<i>Dina Ka Raja</i>	Tree	5	Planted by staff
49	<i>Kabet</i>	Tree	5	Planted by staff
50	<i>Canna</i>	Shrub	5	Planted by staff
51	<i>Bougainvillea</i>	Shrub	15	Planted by staff
52	<i>Coir</i>	Tree	9	Planted by staff
53	<i>Shendi</i>	Shrub	9	Planted by staff
54	<i>Nargis</i>	Herb	9	Planted by students
55	<i>Fish Tail</i>	Herb	9	Planted by students
56	<i>Papaya</i>	Shrub	20	Grown naturally
57	<i>Rubber</i>	Tree	3	Planted by staff
58	<i>Gymnosperm</i>	Shrub	5	Grown naturally
59	<i>Gymnosperm</i>	Shrub	5	Grown naturally
60	<i>Su-Babul</i>	Tree	5	Planted by staff,
61	<i>Korphad</i>	Shrub	5	Planted by staff,
62	<i>Ixora</i>	Shrub	5	Planted by staff,

Table 3: Details of the flora in the premises

Observation: Natural plantations are well maintained in the shared premises.

There are 1,080 nos. of plantations in the premises.

Inference: *The study suggests that:*

- ➔ A display board specifying this area as '**Green zone**' or '**Oxygen zone**' could be displayed at ground floor for sensitization and terrace where the plants are located
- ➔ This is a unique feature and has possibility to become a Best practice, thus these plantations could be documented to undertake the **carbon sequestrations study**
- ➔ Furthermore, the details about these should be **displayed on the digital portfolio** that is the website of campus
- ➔ Each of this space could be named as a **specific type of green zone/ garden**
- ➔ **Scientific name plates and QR coding** of plantations could be undertaken, once done a display board as follows could be developed for stakeholder sensitization

1 अडुलसा	2 नागकेसर	3 रानतबुट	4 रुई	5 सदाफुली	6	7	8 रक्तचंदन	9	10	11 मिरी	12 कवट
Justicia adhatoda	Ceylon ironwood	Hildegardia	French Cotton	Periwinkle	vacant	vacant	Red Sandal Wood	vacant	vacant	Black Pepper	Limonia Acidissima
13 गवती चहा	14 बिल्लीबी	15 जायफल	16 गेळ	17 एरंड	18 बिबा	19 कंकोळ	20 कांडवेल	21 करवंद	22 वाघाटी	23 गुळवेल	24 चाफा
Lemon Grass	Carrabolla	Myristica Fragrans	Catunaregam Spinosa	Ricinus Communis	Semecarpus Anacardium	Pimenta	Cissus Quadrangularis	Bengal currant	Capparis Zeylanica	Giloy	Plumeria Rubra
25 कोकम	26 धोत्रा	27 सागरगोटा	28 वेखंड	29 पुन्नांग	30 गुंज	31 आलू	32 लवंग	33 कोकम	34 तमालपत्र	35	36 वेल्दोडे
Garcinia Indica	Datura Stramonium	Sagargota	Sweet Flag	Calophyllum Inophyllum	Abrus precatorius	Ginger	Syzygium Aromaticum	Garcinia Indica	Cinnamomum Tamala	vacant	Cardamom
37 कोरफड	38 अश्वगंधा	39	40 दालचिनी	41 तगर	42 चक्र फुल	43	44 शतावरी	45	46	47 नाशपती	48
Aloevera	Winter Cherry	vacant	Cinnamomum Verum	Tabernaemontana Elegans stapf.	Star Anise	vacant	Asparagus	vacant	vacant	Persea Americana	vacant
49 आवळा	50 चित्रक	51 कडीपत्ता	52 हळद	53 रातराणी	54 तुळस	55 ओडोमास	56 अमस्ता	57 तमालपत्र	58 लाजाळू	59 आवळा	60 नागलिंगम
Phyllanthus Emblica	Plumbago	Curry Leaves	Turmeric	Cestrum Nocturnum	Ocimum Tenuiflorum	Citronella Plant	Sesbania Grandiflora	Cinnamomum Tamala	Mimosa Pudica	Phyllanthus Emblica	Norantea Guianensis

Reference suggestions 1: Display board

5.2 Fire and life safety measures (Extinguishers)

Observation: The fire extinguishers are available.

Inference: *The study suggests that:*

- ➔ *The area with extinguishers, sand buckets could be demarcated as a 'Fire Zone'*
- ➔ *The **Fire Hose Reel Cabinets** can be numbered and records about the same can be documented in the record rooms*
- ➔ *The general public can be made aware about **Fire Station** through **signages***
- ➔ *The **fire and life safety signages (Including exit signages)** should be increased and displayed.*
- ➔ *There should be a **PASS Board** alongside every fire extinguisher and a **RACE Board** at the location of extreme populace/ footfalls.*



Reference suggestions 2: PASS Board display

5.3 Commuting practice

Observation: The stakeholders (students and staff) use walking or bicycles to and for; this highlights eco-friendly practice.

Inference: *The study suggests that:*

- ➔ *There should **be awareness sessions to switch to battery operated vehicles/ bicycles** for commuting; An '**Eco-vehicle zone**' should be demarcated in the premises with a battery charging point for sensitization purposes*
- ➔ *A 'No vehicle zone' should be developed and displayed as follows*



Reference suggestions 3: Sample about display board

6. Compilation

The study is based on the data collected, analysed, 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 analyse and study the data collected.

- ➔ Uniform Plumbing Code – India, 2008
- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013
- ➔ BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada
- ➔ Used only for understanding Universal design - Universal accessibility Guidelines for Pedestrian, Non-motorized vehicle and Public Transport Infrastructure – Report guidelines by Samartham (National centre for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation.

