

GREEN AUDIT

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

Sustainability study

AUDIT REPORT

Studied for

Jogeshwari Education Society's

College of Commerce, Science & Information Technology

JES Education Complex, Caves Road, Arvind Gandbhir Campus,
Jogeshwari(East), Mumbai - 400060, Maharashtra

Studied in the capacity of

Accredited and Certified

Green Building Professional



Website: <https://thegreenviosolutions.co.in/>

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Valid till **June 2024**

Background reference image Sasin Tipchai on unsplash

Disclaimer

The Audit Team has prepared this report for the **Jogeshwari Education Society's College of Commerce, Science & Information Technology** located at JES Education Complex, Caves Road, Arvind Gandbhir Campus, Jogeshwari(East), Mumbai - 400060, Maharashtra 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 by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

The audit 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 is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

Greenvio Solutions

Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

Sustainable Academe is our department for conducting Audits

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Acknowledgement

The Audit Assessment Team extends its appreciation to the **Jogeshwari Education Society's College of Commerce, Science & Information Technology, Maharashtra** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to **Mr. Kiran Kamat (Jt. Secretary)** and everyone from the Management.

Our heartfelt thanks are extended to the Chairperson of the entire process **Dr. Prashant Shelar**, Principal for the valuable inputs.

We are also thankful to Institute's Task force the faculty members who have played a major role in data collection *Mrs. Vaishali Trivedi, Faculty and Mrs. Sunita Sharma, IQAC Coordinator.*

We highly appreciate the assistance of *Mr. Rishi Shinde & Mr. Laxman Shetty, Mrs. Jasmin Jadhav* and the **entire Teaching, Non-teaching, and Admin staff** for their support while collecting the data.

Sustainable Academe

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

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DETAILED REPORT

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: Jogeshwari Education Society's College of Commerce & IT Date: 15/07/2023

Document objective: Inferences of the Site visit

Observations (Positive aspects)	Suggestions (Improvement aspects)
Green Audit	
- Fire, life safety measures are undertaken	- Water & waste management could be improved
Energy Audit	
- An 100% LED [Energy efficient appliance] premises	- Alternate sources of energy can be explored
Environment Audit	
- Sufficient green cover in premises	- Documentation & reflectance should be done


 Signature & round seal
 Name: Dr. Prashant H. Shelar
 Designation: Principal
For the said Institute


 Signature & round seal
 Name: Mrs. F. A. Shaikh
 Designation: Project Coordinator
For The Greenvio Solutions

1. Introduction

1.1 Statements of the Institution

1.1.1 Vision

The Institute proposes "To channelize young minds not only towards academic goals but also towards their social responsibilities, to provide ample opportunities to nurture and sustain creative talents and multiple intelligences for the service to humanity at large."

1.1.2 Mission

The Institute adheres and focuses "To promote academic excellence & create humane, self-reliant citizens to meet the local and global challenges of the society."

1.1.3 Objectives

The objective of the Institute is:

- To ensure a high standard of education.
- To enrich the students "personality by encouraging their participation in curricular and extracurricular activities.
- To promote sports culture.
- To promote learning opportunities that are flexible and support alternative learning styles.
- To promote positive ways of social interaction, self-confidence enabling to exchange ideas and opinions with others.
- To cultivate organisational skills in dealing with academic and emotional problems of students.
- To nurture the thirst for knowledge and skill in the latest innovations and technologies in education.
- To sensitize the students towards the threatening environmental issues.
- To inspire student to meet the challenges of dynamic society and to fulfil their role as nation builders.

1.2 Assessment of the Institute

1.2.1 Affiliation

The Institute is affiliated to **Mumbai University**, a collegiate state-owned public university in Mumbai and one of the largest university systems in the world.

1.2.2 Certification

The College has received the code under **All India Survey of Higher Education (AISHE)** wherein the code is C-33763.

1.3 Facilities

Some of the key facilities are listed below.

- Well stocked library
- Computer laboratory with latest softwares
- Conference hall
- Hygienic canteen

2. Overview

2.1 Summarised Populace analysis for 2022-2023

2.1.1 Students data

The data (shared by the Institute) shows there were a total of **1,033 students**.

2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	01	02
2	Teaching staff	08	11	19
3	Non-Teaching staff	02	01	03
Total Staff Members		11	13	24

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

The staff data shows the Institute premises had a total of **24 Staff Members**.

2.2 Summarised Populace analysis for 2021-2022

2.2.1 Students data

The data (shared by the Institute) shows there were a total of **1,014 students**.

2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	02	03
2	Teaching staff	08	13	21
3	Non-Teaching staff	02	01	03
Total Staff Members		11	16	27

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

The staff data shows the Institute premises had a total of **27 Staff Members**.

2.3 Site Area & Institute Building Spread Area

The **site area is 1.60 acres and the built-up area is 35,000 sq. ft.**

2.4 Institute Infrastructure

2.4.1 Establishment

The Institute was established in **2009**.

2.4.2 Spatial Organisation

The Institute is located in a pollution free and healthy environment.

The Building is a Reinforced Cement Concrete (RCC) framework building.

There are provisions for staircase for accessibility on the premises, whereas there are amenities such as CCTV, a first aid room, etc.

2.5 Operation and Maintenance of the premises

The interview session and data collection session was held with the staff regarding the operation and working hours. The schedule shared by the team shows that the College is working for Monday to Saturday beginning at 07:30 hours up to 13:00 hours.

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 discussion with team
- 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.

3.4 Activities undertaken for the Green Building Study Audit

- Discussion with the Institute
- Allotment and Initiation by the Institute
- Data collection
- Submission of the files

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO 1A (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: Green audit Energy audit Environment audit

Institute: Jogeshwari Education Society's Date: 15/07/23
College of Commerce and IT

Document objective: Induction Meeting attendance sheet

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Prof. Sunita Sharma	Internal	IQAC Head	
4.	Ass. Prof. Vaishali Trivedi	Internal	Nature Club Head.	

Signature & round seal

Name:

Designation:

For the said Institute



Prashant H Shelar

Prashant H Shelar

Principal



Signature & round seal

Name: Mrs. F. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions

4. Documentation

4.1 Green Practices Audit

The increasing global warming and climate change have made us realise that apart from the enormous strategies need to be taken by individuals and Educational Institutes consistently.

We observed the following points during the process.

- **Social awareness** - *The Institute has taken up awareness drives on various social issues for social upliftment and environmental up gradation.*
- **Cleanliness Campaign** - *The Swachha Bharat Abhiyan is carried out on college premises as well as off-premises.*
- **Silent and peaceful atmosphere** – *The College is located amidst residential areas which are well designed thus these help to maintain the pollution under control and provide a healthy ambience.*
- **Team work** – *The best quality of the College which sets it apart from other institutes is its coordinating and cooperative staff members, as for a building the foundation plays the most important role for its future similarly for an educational institute its staff members do.*
- **Nature club** – *The College has an active Nature Club that undertakes a lot of social and environmental initiatives.*

The team has undertaken certain social awareness activities documented below:

- *Tree Plantation*
- *Run up Program for International Coastal Clean up (College Auditorium)*
- *Juhu beach cleaning (Green Society)*
- *Jogeshwari Station Clean up*
- *Andheri Station Clean up*
- *Beach Clean-Up (Versova)*
- *Make Best out of Waste Competition*

4.2 Waste Audit

Waste is an inevitable part of our lives. The audit provides an approximation of the types of waste generated, location of waste collections, disposal techniques used, waste segregation methodologies adopted. The waste management strategies are studied and ways that can be adopted aiming to make the premise clean and sustainable are proposed.

S. No.	Type of waste	Source and quantity	Current Disposal method	Can be treated/ recycled?	Methodology
1	Paper waste	Newspaper and other paper	Given to Management	Yes	CAN BE TREATED – Should undertake measures
2	E-waste	Computers - Non-biodegradable waste	Given to vendor	Yes	
3	Dry waste in form of leaves	Open space & plantations, papers - Non biodegradable waste	Handed over to municipality	Yes	TREATED – Organic composting can be undertaken
4	Liquid waste	Toilets, washbasins etc.	Let into storm water drain	Yes	CONTINUE - with the current practice
6	Solid waste	Toilets–Biodegradable waste		Yes	

Table 3: Details of the waste management practices adopted by the team

4.3 Water Audit

Water is one of the basic needs. Pure drinking water is a resource that needs to be preserved efficiently. A water audit helps to identify the sources of water consumption, and the water requirement by the premises is met by these sources. The effective usage of water without any wastage should be a mandatory practice. Understanding the techniques as per site context to increase water conservation in terms of awareness and practice can be identified and executed as part of this exercise.

4.3.1 Water availability and consumption

4.3.1.1 Source of Primary water supply

The Institute uses drinking water for daily consumption through the 'OVERHEAD' and 'UNDERGROUND' water tanks used for primary purposes.

4.3.1.2 Source of Secondary water supply

The Institute uses the secondary sources of water supply for general usages such as watering

plants, kitchen, toilets, and wash basins connected to the labs and other spaces. At present, there are 'NO SPECIFIC SOURCES' for secondary purposes and the water tanks are served for dual purposes of primary and secondary usage.

4.1.3.3 Source of Tertiary water supply

The tertiary source of water is the additional source of water harvesting. *We have suggested adopting practice of rain water bunds around the block and connecting the overflow pipes of the rain water harvesting pits/ syntax tank with 10,000 – 50,000 litres capacity; however, as the building is located in a shared campus within the suburban locality of urban Mumbai there are certain restrictions of Management and Government approval to undertake both of these recommendations.*

4.3.2 Areas of water usage

Based on the inventory, data shared it was found that the premise has the following facilities:

- General toilet for students, staff
- Urinals
- Taps in wash basins in toilets, canteen
- Taps in Canteen

4.4 Health and Hygiene Audit

The hygiene is a part and parcel of our daily life. It is extremely essential to keep the surroundings clean in the same manner as we would want our houses to be. Educational Institutes have a bigger role to play in order to affect the young minds in the positive manner through better hygienic practices.

4.4.1 Facilities available

The Institution has washroom facility, hand wash, drinking water and dustbin facilities.

4.4.2 Hygiene aspects

There was no major hygiene issue observed anywhere in the premises. The toilet areas however need an up gradation.

5. Suggestion

Section-wise suggestions related to premises

The following suggestions are to be considered as a **second priority** for implementation. These **should be executed within the next 3.5 years from the date of the Report submission**. The Institute can execute a plan after discussion with Project Head.

5.1 Green practices Audit

Plant as a gift - As a kind gesture, the guests visiting the premise can be asked to plant a small plant on the premise itself and they can be even given plants/bouquets from the flowers of the plants on the premise as a gift.

5.2 Waste Audit

Include better plastic/ E-waste management measures - The Institute can celebrate one day of every month as a 'Plastic/ E-waste awareness day' The stakeholders (Students and staff members) can be asked to bring plastic/ E-waste which can be further given to an NGO for recycling or better purpose.

5.3 Water Audit

Waterless urinals - There can be the provision of waterless urinals as a Green Building initiative in the premise, either the existing ones can be replaced with such a facility or new toilets can be constructed in this manner.

5.4 Health and Hygiene Audit

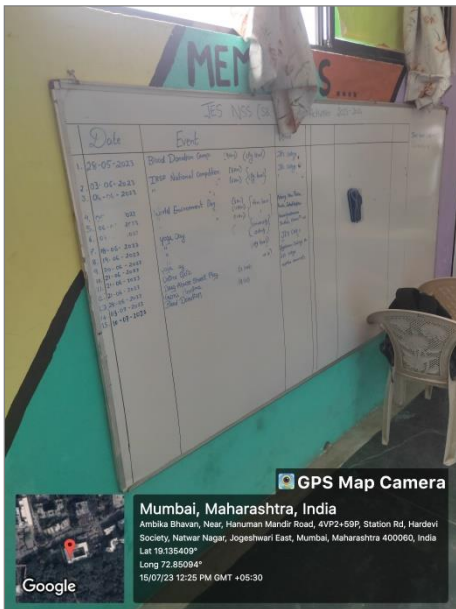
- **Courtyards and duct areas** – These are located in the internal and setback should have vertical gardens for beautification.
- **Signboards** – The Institute should have multiple signboards about 'No smoking' and 'Healthy premises' at every nook and corner of the Institute.
- **Compound wall** – The compound wall should have awareness messages about 'No Smoking' and 'No Tobacco'
- **Toilet hygiene** – There should be facilities such as potpourri, camphor tablets in the toilet to avoid smell and health related issues.

On-site investigation and physical verification

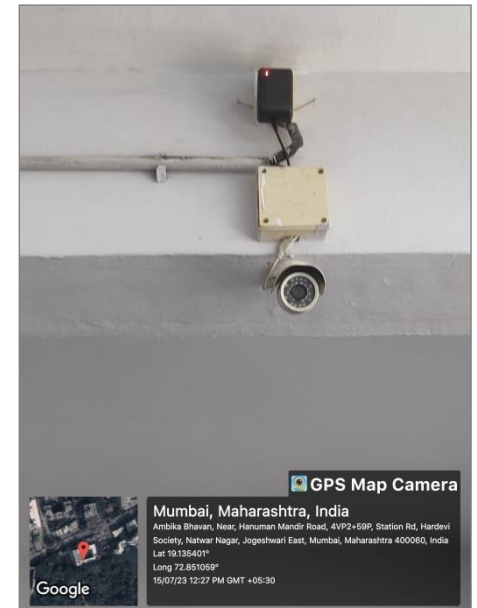
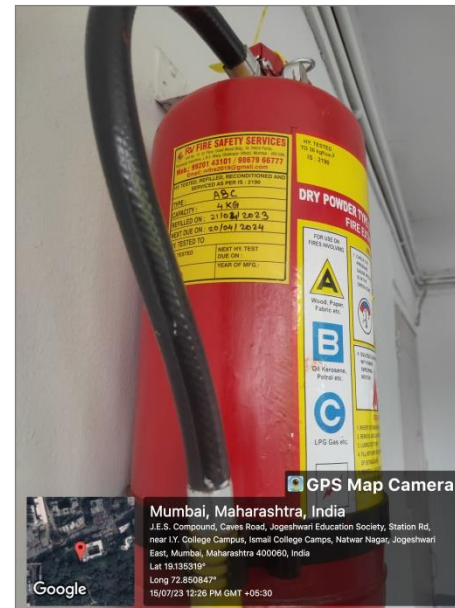
Audit Team during the visit and other photos collected during data documentation



Induction, exit meeting and group photo with the team



On site investigation with the team in NSS area and entrance space



On site investigation with the team about the water cooler, fire extinguisher and CCTV camera areas

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 Samarthyam (National center for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation and www.umassd.edu
- ➔ The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- ➔ Images on site by Coordinators of the both teams
- ➔ Icon images used by <https://www.vecteezy.com/free-vector/security-camera-icon> and <https://www.vecteezy.com/free-vector/electric-car-icon>

