GREEN AUDIT

STUDY PERIOD (ONE YEAR) 2024 - 2025

Sustainability study

AUDIT REPORT

Studied for

CMR Engineering Educational Society's

CMR Engineering College

Kandlakoya Village, Medchal Road,

Hyderabad- 501401, Telangana, India

Studied in the capacity of

Accredited and Certified

Green Building Professional

Studied by

Greenvio Solutions

Email: greenviosolutions@gmail.com

Background reference image Sasin Tipchai on unsplash

Disclaimer

The Audit Team has prepared this report for **CMR Engineering Educational Society's CMR Engineering College** located at *Kandlakoya Village, Medchal Road, Hyderabad-501401, Telangana, 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 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.

Ar. Nahida Abdulla

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 **CMR Engineering Educational Society's CMR Engineering College, Telangana** 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 everyone from the Management.

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

Sustainable Academe
Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

Contents

1. Introduction

1.1 About the Institution

Established in 2010, CMR engineering college is one of the top premier private Engineering colleges in Hyderabad spreads over the vast area of 10 acres. The CMR College is authorized under All India Council for Technical Education (AICTE), New Delhi and affiliated to JNTUH. In the further journey, the college is also rated 5 Star under Institution Innovation Council, Ministry of Education, Govt of India & Achieved ARIIA Ranking.

2. Overview

2.1 Summarised Populace analysis for 2024-25

2.1.1 Students data

The data (shared by Institute) shows there were 3,049 male and 1,582 female students.

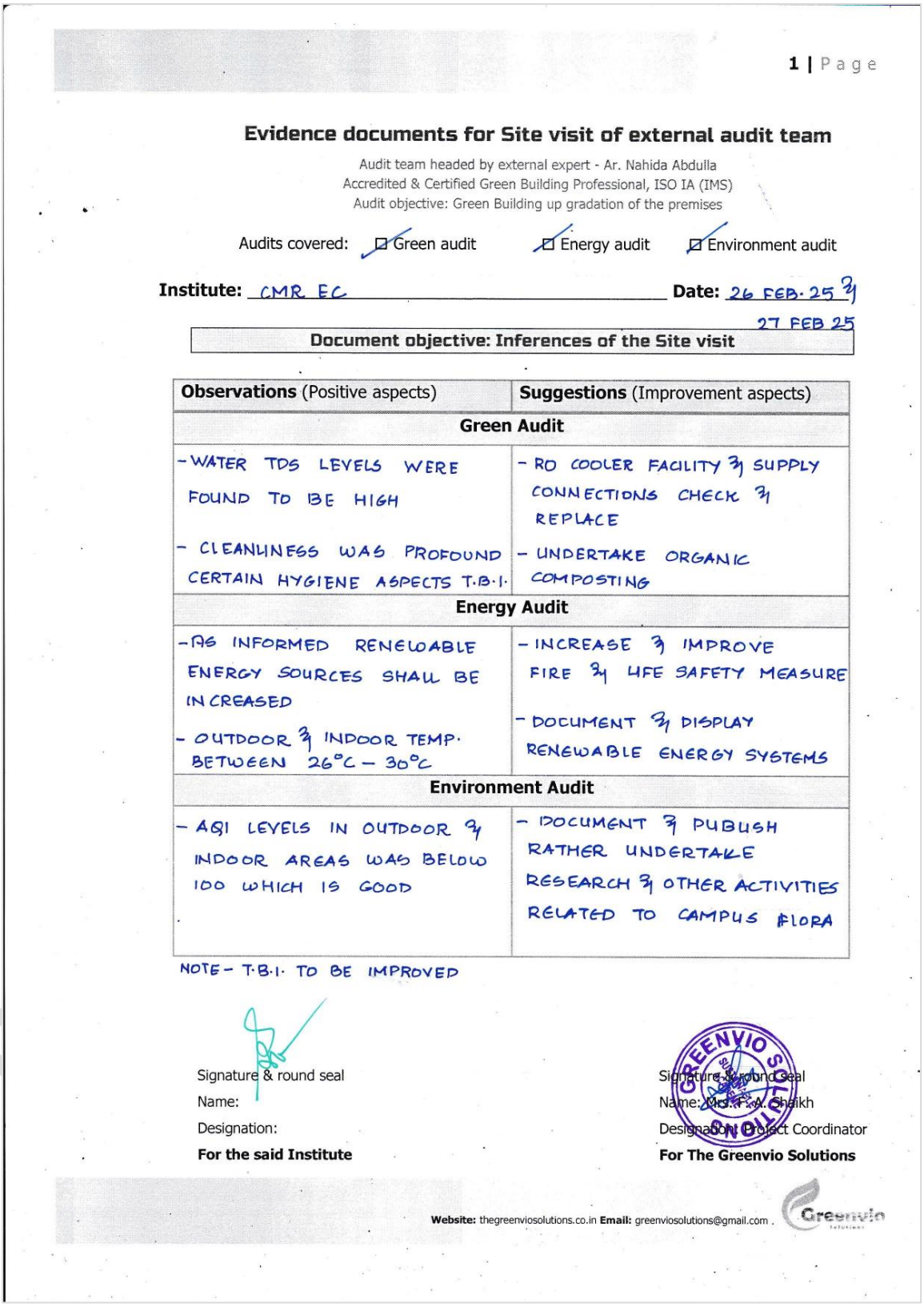
Thus total 4,631 students.

2.1.2 Staff data

The data (shared by Institute) shows there were 376 staff members.

Thus, total populace stands at 5,007 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: CMR EC **Date:** 26 FEB. 25 &
27 FEB 25

Document objective: Inferences of the Site visit

Observations (Positive aspects)	**Suggestions** (Improvement aspects)
Green Audit	
- WATER TDS LEVELS WERE FOUND TO BE HIGH - CLEANLINESS WAS PROFOUND CERTAIN HYGIENE ASPECTS T.B.I.	- RO COOLER FACILITY & SUPPLY CONNECTIONS CHECK & REPLACE - UNDERTAKE ORGANIC COMPOSTING
Energy Audit	
- AS INFORMED RENEWABLE ENERGY SOURCES SHALL BE INCREASED - OUTDOOR & INDOOR TEMP. BETWEEN 26°C – 30°C	- INCREASE & IMPROVE FIRE & LIFE SAFETY MEASURE - DOCUMENT & DISPLAY RENEWABLE ENERGY SYSTEMS
Environment Audit	
- AQI LEVELS IN OUTDOOR & INDOOR AREAS WAS BELOW 100 WHICH IS GOOD	- DOCUMENT & PUBLISH RATHER UNDERTAKE RESEARCH & OTHER ACTIVITIES RELATED TO CAMPUS FLORA

NOTE - T.B.I. TO BE IMPROVED

Signature & round seal
Name:
Designation:
For the said Institute

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

Website: thegreenviosolutions.co.in **Email:** greenviosolutions@gmail.com .

Plate 1: Evidence files related to inferences

4. Investigation

The following results were carried out during visit on ***26 February 2025.***

S. No.	Block	Filter/ Water cooler specific location	Actual level	Required level	Inference
1.	F- Block	First floor	190	50 In certain cases where water is hard 100-120 can be considered	To be improved
2.	A-Block	First floor	182		To be improved
3.	A-Block	-	191		To be improved
4.	B-Block	Ground floor	211		To be improved
5.	B-Block	First floor	182		To be improved
6.	B-Block	First and second floor mid landing	No water in one tap and other tap showed 112		Much better than others
7.	C-Block	Second and third floor mid landing	184		To be improved

Table 1: Drinking water testing details

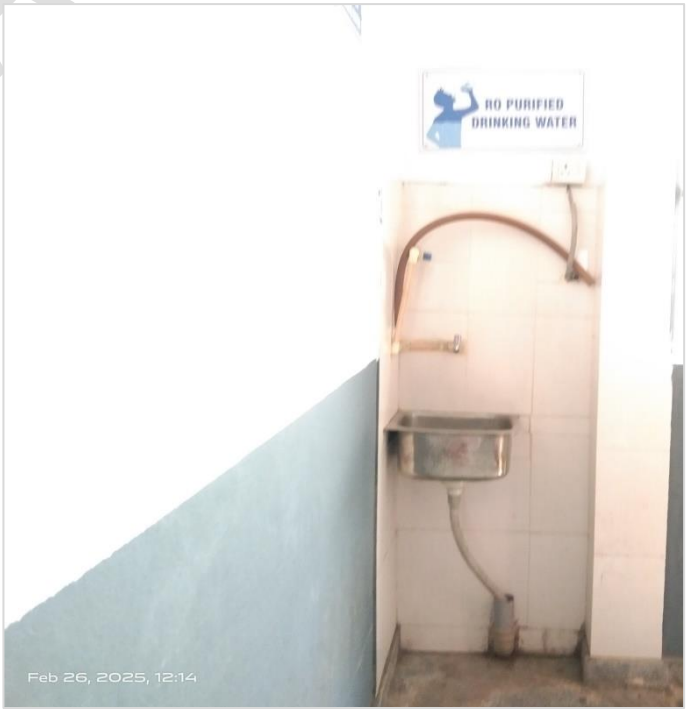


Plate 2: Drinking water areas

5. Documentation

5.1 Green Practices Audit

5.1.1 Green practices

The practices undertaken as an awareness/ sensitization activity with stakeholder involvement have been documented below: (June 2024 onwards)

S. No.	Name of the event	Why and how was it celebrated?	Date
1	A session on "Health through Drugless Therapy - Naturopathy" was conducted for NSS volunteers by Dr. M. Syamala, Senior Medical Officer at Nature Cure Hospital	1.Introduce the principles and benefits of naturopathy 2.Encourage NSS volunteers to integrate healthy practices into their daily lives. 3.Promote the idea of community health through drugless therapies	27-08-2024
2	National Energy Conservation Walk	The "Energy Conservation Walk" was organized on 17th December 2023 by CMR Engineering College in association with the Institute of Engineers India (IEI), Kharithabad. The event took place at Necklace Road, Kharithabad, and was aimed at raising awareness about the importance of energy conservation and its impact on the environment	17-12-2024

Table 2: Details of the environmental initiatives undertaken by Institute

5.1.2 Community development

The details of ***extension initiatives*** under various heads in Institute are documented below:

S. No.	Type	Since	Coordinator name
1.	National Service Scheme (NSS)	Aug2012-Jul 2022	Mr.Vignesh
2.	National Cadet Corps (NCC)	09-09-2024	Mrs.Renuka Ajjada
3.	Earn while you learn scheme	Oct-14	Dr.M.VijayKarthik
4.	Employability Skills centre	Jul-20	HOD's

5.	Neighborhood development scheme	Aug-23	Dr.Laxmaiah
6.	Unnat Bharat Abhiyan	14-11-2019	Mr.LakshmipathiYerra
7.	Eco club named Akriti	29-04-2017	Mrs.R.Shrisha

Table 3: Details of the extension initiatives by the Institute

5.2 Waste Audit

5.2.1 Waste management (Parameters adopted)

The following practices are common to entire campus.

S. No.	Type	Details
1	Solid waste (Toilets)	Collected and disposed of through a sewage treatment system or municipal waste management services. In some cases, treated in on-site septic tanks or bio-digesters to reduce environmental impact.
2	Organic waste (Regular)	Collected separately and processed through composting or bio-digestion to produce organic fertilizer for landscaping and gardening. Can also be sent to municipal organic waste processing centers.
3	Liquid waste (Toilets, wash basins)	Directed to sewage treatment plants where it undergoes filtration, chemical treatment, and biological treatment before being safely discharged or reused for non-potable purposes like irrigation.
4	Chemical waste from laboratories	Stored in labeled containers and disposed of as per hazardous waste management regulations. Neutralization or chemical treatment is done before disposal to minimize environmental harm. Sent to authorized waste disposal agencies.
5	Toxic waste from laboratories	No information provided
6	Bio-waste (Sanitary)	Collected separately and disposed of in accordance with biomedical waste regulations. Sent to incineration or sterilization facilities to prevent contamination and disease spread.
7	Medical waste (Pharmacy etc.)	No information provided
8	Construction waste and reuse (Only if applicable)	Reusable materials like bricks, wood, and metal are salvaged for reuse in other projects.
9	Paper	Sent for recycling
10	E-waste	M&F Enterprise
11	Instrument waste	M&F Enterprise

Table 4: Details of the waste management practices

5.2.2 Dustbins study

There are 181 dustbins in indoor and 35 in outdoor areas.

5.3 Water Audit

5.3.1 Water availability and consumption

5.3.1.1 Source of Primary water supply

The facilities are noted below:

S. No.	Type	Nos.	Location	Size	Capacity (litres)
1	Underground	1	Block -A	20x30x6ft	1,00,000
2	Overhead	5	Block-B	10x15x6ft	50,000
3	Fire tank	1	Block -A	20x30x6ft	1,00,000
4	RO Plant	2	Block-A	1000	-

Table 5: Water tanks in the premises

5.3.1.2 Source of Secondary water supply

The Institute uses water supply for secondary usages such as watering plants, toilets, and wash basins and other spaces. There are four bore wells with 400 ft. depth.

5.3.1.3 Source of Tertiary water supply

The tertiary source of water is the source of water harvesting.

S. No.	Source	Size (in ft.)	Capacity	Used for what purpose
1	Underground pit	6 X 4 X 3’	1,00,000	Watering the plants in garden area

Table 6: Rain water harvesting details

5.3.1.4 Source of Reusing waste water

This initiative is practiced through sewage treatment plant.

5.3.1.3 Water proportion study

- As per the Chapter 2 of the Report, total footfalls in premises were **5,007 nos.**
- Taking entire requirement into consideration, **67,28,156 litres is the total water requirement** (Average assuming certain nos. for primary and secondary purposes)
- Bifurcating this study further we can assume **2,69,126 litres** for drinking and primary purposes ONLY.
- As per data shared; the total capacities available are more than 3,50,000 litres; no deficiency or water shortage was observed or informed.

5.4 Health and Hygiene Audit

There are facilities such as dustbin are available; no odours issue was observed.

However, to a very great extent mosquitoes were observed in huge nos.

Awareness posters are displayed.

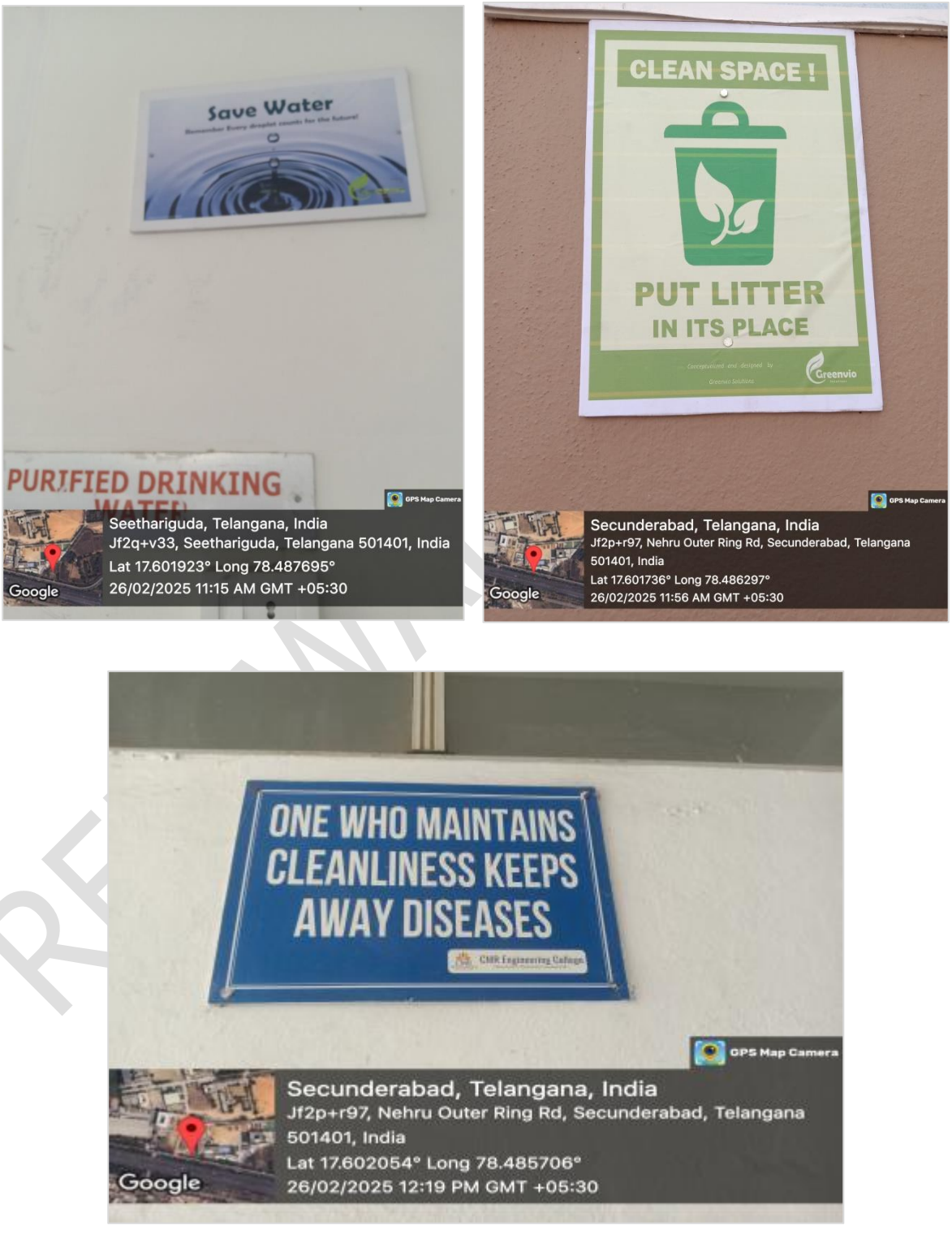


Plate 3: Awareness posters in the campus

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 June 2022 to May 2023 and June 2023 to May 2024
- Renewal study is currently done for June 2024 onwards

6.1 Compliance status in form of Action taken report

The inputs are documented below:

6.1.1 Waste Audit Implementation

Organic Compost Pit Maintenance:

The compost pit maintenance methodology has been refined for **better waste decomposition and efficiency**, incorporating composting by using Agaha compost pits

6.1.2 Health and Hygiene Audit

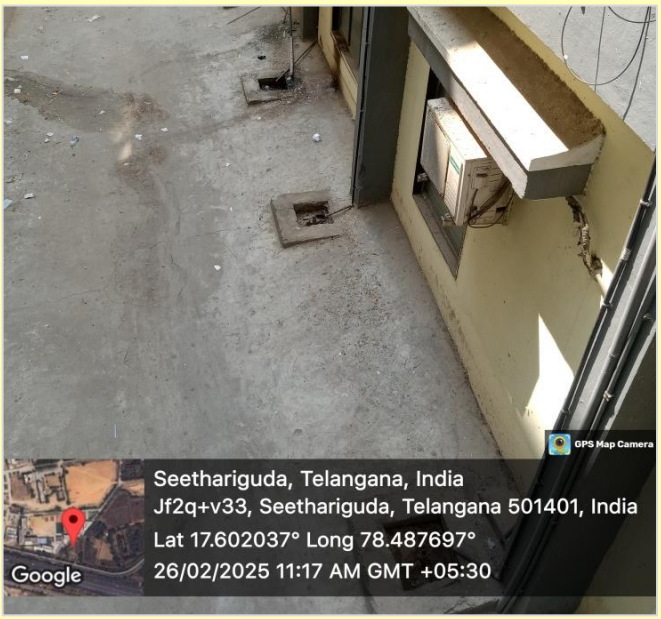
Regular sanitation and monitoring ensure a clean and hygienic restroom environment

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.	Green practices aspect **Aspect area:** **Awareness**	Beautify the compound walls with awareness messages 
2.	Water aspect **Aspect area:** **Water cooler B–block**	Block-B should have water coolers on all floors or atleast one of the floors
3.	Water aspect **Aspect area:** **Water cooler C–block**	 The water cooler is wrongly located in mid-landing; this position should be shifted

4.	Water aspect **Aspect area:** **Information display**	  

		Every water tank in ground and terrace/ external pit/ water cooler should be painted with information as follows: ➲ Nos. ➲ Capacity in cu. Litres or litres ➲ Usage – Primary (Drinking); Tertiary (Rain water) and Secondary (Cleaning, washing, flushing, watering etc.) ➲ Last cleaning maintenance date and by whom ➲ Name and logo of the Institute Paint the pits and use colour coding as follows: ➲ Red – Fire ➲ Cobalt blue – Rain Water harvesting ➲ Sky blue - Drinking water ➲ Grey – Electrical ➲ Brown – Sewage/ waste water
5.	Waste aspect **Aspect area:** **Organic waste Regular)**	***Organic composting should be undertaken with information board or detail manual***
6.	Waste aspect **Aspect area:** **Dustbins**	Intrdouce the signage and three separate bins on every floor near staircase/ lift area; currently it is avaialbel but not on every floor.  ***Separate dustbins signages and bins***
7.	Health & Hygiene aspect **Aspect area:** **Zone demarcation through signages**	Introduce zone boards (Optional through mention of state/ central govt. acts) at entrance of the premises in an enlarged A1 poster

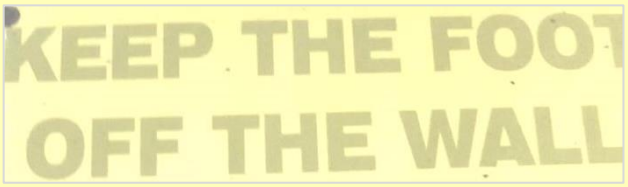
		  ***Sample images for zones*** Image source: Compliance signs
8.	Health & Hygiene aspect **Aspect area:** **Mosquitoes**	Mosquitoe repellant machine should be installed in every corner/ space of campus 24x7; Additionally, pest control for mosquitoe issue should be undertaken
9.	Health & Hygiene aspect **Aspect area:** **Cleanliness**	Introduce a display as follows in appropriate locations: 

Table 7: 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.

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

- IGBC Green Landscape Rating system, March 2013