

GREEN AUDIT

STUDY PERIOD (TWO YEARS) 2021 – 2022 AND 2022 – 2023

Sustainability study

RENEWAL AUDIT REPORT

Studied for

Cosmopolitan Education Society's

**Valia Chhaganlal Laljibhai College of Commerce
& Valia Lilavantiben Chhaganlal College of Arts**

D. N. Nagar, Cosmopolitan Education Society Road,
Andheri (West), Mumbai - 400053

Studied in the capacity of

**Accredited and Certified
Green Building Professional**



Studied by

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

Email: greenviosolutions@gmail.com

Valid till **30 April 2024**

Disclaimer

The Audit Team has prepared this report for the **Cosmopolitan Education Society's Valia Chhaganlal Laljibhai College of Commerce & Valia Lilavantiben Chhaganlal College of Arts** located at D. N. Nagar, Cosmopolitan Education Society Road, Andheri (West), Mumbai – 400053, Maharashtra, India based on input data submitted by the College and analyzed 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 a 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 Hon'ble Management and College. 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.

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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 an Accredited and Certified Green Building Professional. 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 an 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

Palghar District, Maharashtra- 401208

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Acknowledgment

The Audit Assessment Team thanks the **Cosmopolitan Education Society's Valia Chhaganlal Laljibhai College of Commerce & Valia Lilavantiben Chhaganlal College of Arts, Maharashtra, India** for assigning this important work of Green 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 Chairperson of the entire process **1. Dr. Shobha Menon**, Principal for their valuable inputs.

We are also thankful to College's Task force who have extended their efforts towards the project - **Dr. Bageshree Bandekar, Mr. Arvind Panchal, Ms. Maitri Dave (Special mention for the excellent coordination), Mr. Shubham Katurde, Mr. Anil Talekar, Mr. Sadanand Sawant and Mr. Prabhakar Chougule.**

We highly appreciate the assistance of 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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Evidence documents for Site visit of external audit team

Audit team headed by external expert: Mr. Nahida Atsulla
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: Valia C.L. College Date: 15/05/2023

Document objective: Inferences of the Site visit

Observations (Positive aspects)	Suggestions (Improvement aspects)
Green Audit	
<ul style="list-style-type: none"> - Rain water harvesting - Eco-bin in place - Plastic & e-waste management practiced. 	<ul style="list-style-type: none"> - Aerators - Dual flush - 'No' suggestion for waste management.
Energy Audit	
<ul style="list-style-type: none"> - Renewable energy has been implemented - Sensor based taps lights implemented 	<ul style="list-style-type: none"> - Sensor based taps & hand dryers - Additional awareness posters
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Signature & round seal
Name: Shobha Menon
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 About the Institute

The **Valia Chhaganlal Laljibhai College of Commerce and Lilavantiben Chhaganlal College of Arts** was established in **1986** under the aegis of the **Cosmopolitan Education Society**. The parent body, Cosmopolitan Education society was established in 1961, when a group of likeminded residents of D. N. Nagar came together, inspired by the idealism of establishing a quality educational institution in the locality.

The College has the mission **to provide value-based quality education and training in an environment conducive to intellectual, social and cultural enrichment to mould responsible citizens with a harmonious blend of Indian traditions and modern technology for a better tomorrow.**

1.2 Populace analysis

1.2.1 Students data

- The student data (shared by the College) shows there were a total of **1,298 male and 1,365 female students** thus **a total of 2,663 students** in the premises in the academic year 2021-2022.
- The student data (shared by the College) shows there were a total of **1,226 male and 1,367 female students** thus **a total of 2,593 students** in the premises in the academic year 2022-2023.

1.2.2 Staff data

- The staff data shows the premises had 22 male and 31 female staff members; thus a **total of 53 Staff Members** in the premises in the academic year 2021-2022.
- The staff data shows the premises had 27 male and 29 female staff members; thus a **total of 56 Staff Members** in the premises in the academic year 2022-2023.

1.3 Site and building spread area

The site area is **0.93 acres** and **built-up area is 93,051.78 sq. ft**

1.4 Accreditation of the Institute

The Institute has received the following:

- NAAC accreditation under process
- NIRF ranking – Annual participation

1.5 Academic arena

The College with a total **strength of more than 2,500 students** offers undergraduate and post graduate programs both under the grant in aid system as well as the self - financed system. The courses provided by the College are documented below:

1.5.1 Undergraduate courses

1. Bachelor of Commerce (B. Com)
2. Bachelor of Science Information Technology (B.Sc. IT)
3. Bachelor of Management Studies (B.M.S.)
4. Bachelor of Arts Multimedia and Mass Communication (B.A.M.M.C)
5. Bachelor of Commerce Accounting and Finance (B.Com A&F)

1.5.2 Post-Graduate courses

1. Masters of Science (Information Technology)
2. Masters of Science (M. Com)

1.6 Achievements of the Institute

The Institute has a tremendous track record of excellence in Built form and educational services provided, below are some of the achievements of the prestigious Institute.

S. no	Name of the activity	Name of the award	Name of the awarding body
Academic year 2021-2022			
1.	E-waste collection	Certificate & Letter of Appreciation	Threco The Recycling Company

2.	Handmade Greeting Cards for Indian Soldiers	Certificate of Appreciation	Making A Difference Foundation
3.	Beach Clean-up Drive at Madh-Island	Letter of Appreciation	Madh Island Welfare Association
4.	Advocacy and Talent Development Sessions	Letter of Appreciation	The Movement (India)
5.	Beach Clean-up Drive	Letter of Appreciation	United Way Mumbai
6.	Pulse Polio Immunization Drive	Letter of Appreciation	Municipal Corporation of Greater Mumbai (MCGM)
7.	Bottles for Change Programme	Certificate of Appreciation	Bisleri International Pvt. Ltd.
8.	Vaccination Drive	Letter of Appreciation	Brihanmumbai Municipal Corporation (BMC)
9.	Teaching Internship Program	Letter of Appreciation	Rajani Foundation (India)
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10.	Environmental Education project	Certificate of Appreciation	United Way Mumbai
11.	Run for leprosy and Committing to health, Education and Development of India	IDF Best NSS Supporter Award	Indian Development Foundation (IDF)
12.	Beach Clean-Up Drive	Certificate of Appreciation	Jay Foundation
13.	Online Training of Organ Donation Drive	Certificate of Appreciation	V4organs Foundation
14.	Beach Clean-Up Drive	Letter of Appreciation	Madh Welfare Association
15.	E-waste collection	Certificate of Appreciation	Threco The Recycling Company
16.	Session on cyber security	Special Appreciation for Media Outreach	Cyber Siksha Champion of the year
17.	Plastic Collection and Submission Drive under Bottle for Change Project	Certificate of Appreciation	Bisleri International Pvt. Ltd.

Plate 1: Details of the awards received by the Institute

1.7 Industry Collaborations

The details of the collaborations with external partners are documented below:

S. No	Year	Name of the Organisation/ Institution
1	2021–2022	MOU with <i>Anudip Foundation</i>
2	2022-2023	MOU with <i>Technoserve</i>
3	2022-2023	MOU with <i>Durgadevi Saraf Institute of Management</i>
4	2022-2023	MOU with <i>Quick Heal</i>

Table 1: Details of the MoU signed by the Institute

1.8 Timeline of activities for research

As the College had undergone a renewal for the Academic year 2021-2022 and 2022-2023, data collection processes for verification purposes were asked to be submitted.

- ➔ Discussion with the College
- ➔ Allotment and Initiation by the College
- ➔ Process discussion with team
- ➔ Data submitted by College
- ➔ 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: Valia C. L. College Date: 15/5/2023

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.	Dr. Shobha Menon	Internal College Committee	Principal	Shobha Menon
4.	Ms. Maitri Dave		Faculty	
5.	Dr. Bageshree P.B.B		I@AC Coordinator	P.B.B.
6.	Mr. Anil Talekar		Office Superintendent	Anil Talekar
7.	Mr. Probhakar Chougale		Campus Supervisor	P.A. Chougale



Signature & round seal
Name: Shobha Menon
Designation: Principal
For the said Institute



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

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

Institute: Valia. C. L. College Date: 15/5/2023

Document objective: Exit 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.	Dr. Shobha. Menon	Internal college Committee	Principal	Shobha Menon.
4.	Ms. Maithi Dave		Faculty	
5.	Dr. Bageshree. P.B.B		IOAC Coordinator	
6.	Mr. Anil. Talekar		Office Superintendent	
7.	Mr. Prabhakar Chaugale		Campus Supervisor	

Shobha. Menon.

Signature & round seal

Name: Shobha. Menon

Designation: Principal

For the said Institute

Signature & round seal

Name: Mrs. F. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions

2. Compliance

The compliance study was carried out through investigative ways. This was done to understand the **extent of suggestions and their implementations based on previous report of Academic years 2019-2020 and 2020-2021.**

The details of the suggestions are based on the Original Report dated 22 January 2022 is further documented below. It is based on the data collection process. The details of activities by NSS, Nature Club, Student Social Responsibility Club and Rotary Club are documented below:

2.1 Green practices under taken for 2021-2022

- ➔ 2nd October 2021 to 20th March 2022 - Beach Clean-up Drive at Madh island in collaboration with Madh island Welfare Association NGO.
- ➔ 18th October 2021 Clean-up Drive at Bandra Bandstand in collaboration with Mission Green Mumbai NGO and the University of Mumbai.
- ➔ 30th October 2021 Clean-up Drive at Versova Police Station.
- ➔ 31st October 2021 Swachh Bharat Cleanliness Drive in the college campus.
- ➔ 19th December 2021 Clean-up Drive at Chhota Kashmir in collaboration with Mission Green, Mumbai.
- ➔ 17th February 2022 Clean-up Drive at Aarey Colony and in collaboration with Mission Green, Mumbai.
- ➔ 18th November 2021 to 15th March 2022 Clean-up Drive at Dana Pani Beach Cleaning in association with United Way Mumbai NGO.
- ➔ 28th July 2021 On the occasion of World Conservation Day, we planted 41 saplings in the college campus.
- ➔ 1st November 2021 As a part of the Majhi Vasundhara Campaign, we planted 44 saplings at the Ashok Singhal Rugna Seva Sadan.
- ➔ 19th November 2021 A Webinar on 'Marine Pollution' in collaboration with United Way Mumbai NGO

- 24th December 2021 Collected plastic waste from adopted area at Joseph Patel Wadi and handed them over it to Bisleri International Private Ltd.
- 6th to 11th December Environment Week
- 5th February 2022 QR coding of trees

2.2 Green practices under taken for 2022-2023

Event Date	Event Name
05 th June, 2022	Tree Plantation Drive- Mission Green Mumbai
06 th June, 2022	Clean-Up Drive at Worli Fort under Majhi Vasundhara Campaign
11 th June, 2022	College Campus & D.N. Nagar Bus Stop Clean-Up Drive under Majhi Vasundhara Campaign
13 th June, 2022	Versova and Joseph Patel Wadi Clean-Up Drive and Street Play under Majhi Vasundhara Campaign
30 th June, 2022	Dana Pani Beach Clean-Up Drive
4 th August, 2022	Orientation Programme on International Coastal Clean-Up Drive at R.D National College
12 th August, 2022	Clean-Up Drive at Joseph Patel Wadi under Har Ghar Tiranga Campaign
13 th August, 2022	Aaram Nagar Pipe Line Police Station Clean-Up Drive under Har Ghar Tiranga Campaign
30 th August, 2022	Orientation Programme on International Coastal Clean-Up Drive in College
10 th September, 2022	Beach Clean-Up Drive at Juhu (Indian Development Foundation)
10 th September, 2022	Beach Clean-Up Drive at Juhu (Jay Foundation)
14 th September, 2022	Dry Waste Collection Drive
17 th September, 2022	International Coastal Clean-Up Drive at Juhu
23 rd September, 2022	Plastic Collection and Submission Drive under Bottle For Change Project
10 th October, 2022	Madh Island Beach Clean-Up Drive
14 th October, 2022	College Campus Clean-Up Drive under Clean India Campaign

17 th October, 2022	Plastic Collection and Clean-Up Drive at Joseph Patel Wadi under Clean India Campaign
19 th October, 2022	Versova Police Station Clean-Up Drive under Clean India Campaign
20 th October, 2022	Plastic Collection and Submission Drive under Bottle For Change Project
11 th November, 2022	Mahim Dargah Beach Clean-Up Drive
25 th November, 2022	Maritime Shore Walk at Juhu Koliwada
9 th December, 2022	Plastic Collection and Submission Drive under Bottle For Change Project
11 th December, 2022	Versova Beach Clean-Up Drive under Mazi Mumbai, Swaccha Mumbai.
12 th December, 2022	Awareness session on all types of plastic waste segregation and recycling under Mazi Mumbai, Swaccha Mumbai.
14 th December, 2022	Versova Police Station Clean-Up Drive under Mazi Mumbai, Swaccha Mumbai.
18 th December, 2022	Madh Beach Clean-Up Drive under Mazi Mumbai, Swaccha Mumbai.
23 rd December, 2022	Plastic Collection and Submission Drive under Bottle For Change Project
6 th February, 2023	Plastic Collection and Submission Drive under Bottle For Change Project
6 th December 2022	E-waste collection
22 nd March 2023	Earth Day
16 th September 2022	Waste to knowledge
17 th September 2022	E-waste collection
29 th July 2022	Tiger Day celebration
19 th September 2022	Plastic Waste Collection
21 st July 2022	Tree Plantation Drive

Table 2: Details of the initiatives undertaken by the team in 2022-2023

3. Evidences

The information shared by the Institute to support the documentations are listed below:

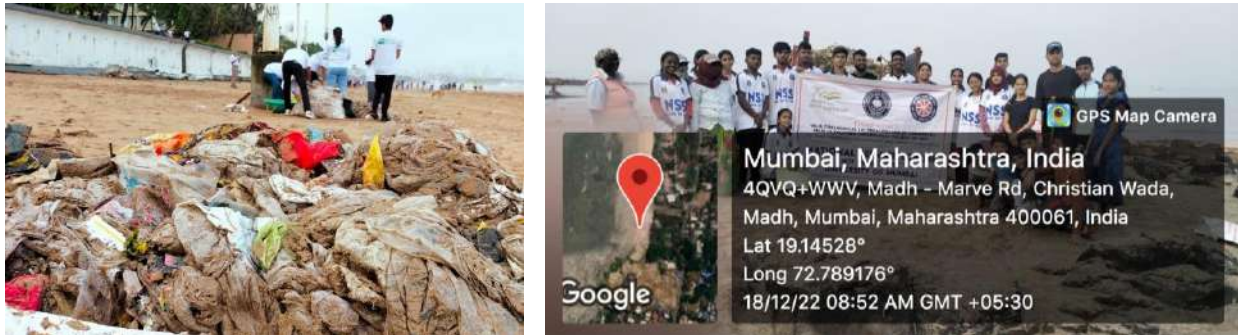


Plate 2: Beach clean-up drive by the team



Plate 3: E-waste and plastic waste collection drive by the team



Plate 4: Installation and beautification of the bird feeders by the team

4. Inferences

4.1 Section-wise recommendations

The following suggestions are to be considered as a **first priority** for implementation. These **should be executed within the next 1.5 to 2.5 years from the date of the Report submission**. The Institute can execute a plan after discussion with Project Head.

4.1 Green 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.
- ➔ **Environmental awareness** - There can be various artworks on the compound wall giving the message of saving the environment through the joint efforts of the students and staff thereby making the student socially and environmentally responsible citizens.
- ➔ **Documentation** – Improve and increase the documentation and visibility/ reflectance of the environment related events on the website, social media handles
- ➔ **Undertake environment study of local areas** – This aspect is w.r.t. environmental parameters and submits the same to local municipality for further up gradations.

4.2 Waste Audit

- ➔ **Dustbins at every 100m** - There should be a dustbin at every 50-100 in the open spaces
- ➔ **Material of the dustbin** - The current plastic dustbins should be replaced with eco-friendly material.

4.3 Health and Hygiene Audit

Improve the smell issue near the compost zone.

On-site investigation and physical verification

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



Group photo with core team including Principal Madam & Coordinator; Investigation of the rainwater harvesting pit



Investigation around the rain water harvesting pit, compost pit and backyard beautification



Students working on site for beautification and awareness through QR codes

5. 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



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17.	Plastic Collection and Submission Drive under Bottle for Change Project	Certificate of Appreciation	Bisleri International Pvt. Ltd.

Plate 1: Details of the awards received by the Institute

1.7 Industry Collaborations

The details of the collaborations with external partners are documented below:

S. No	Year	Name of the Organisation/ Institution
1	2021–2022	MOU with <i>Anudip Foundation</i>
2	2022-2023	MOU with <i>Technoserve</i>
3	2022-2023	MOU with <i>Durgadevi Saraf Institute of Management</i>
4	2022-2023	MOU with <i>Quick Heal</i>

Table 1: Details of the MoU signed by the Institute

1.8 Timeline of activities for research

As the College had undergone a renewal for the Academic year 2021-2022 and 2022-2023, data collection processes for verification purposes were asked to be submitted.

- ➔ Discussion with the College
- ➔ Allotment and Initiation by the College
- ➔ Process discussion with team
- ➔ Data submitted by College
- ➔ 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: Valia C. L. College Date: 15/5/2023

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.	Dr. Shobha Menon	Internal College Committee	Principal	Shobha Menon
4.	Ms. Maitri Dave		Faculty	
5.	Dr. Bageshree P.B.B		IEAC Coordinator	P.B.B.
6.	Mr. Anil Talekar		Office Superintendent	Anil Talekar
7.	Mr. Probhakar Chougale		Campus Supervisor	P.A. Chougale


Signature & round seal
Name: Shobha Menon
Designation: Principal
For the said Institute


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

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO 14 (IMS)
Audit objective: Green Building up gradation of the premises

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

Institute: Valia. C. L. College Date: 15/5/2023

Document objective: Exit 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.	Dr. Shobha. Menon	Internal college Committee	Principal	Shobha Menon
4.	Ms. Maithi Dave		Faculty	
5.	Dr. Bageshree. P.B.B		IOAC Coordinator	
6.	Mr. Anil. Talekar		Office Superintendent	Anil Talekar
7.	Mr. Prabhakar Chaugale		Campus Supervisor	P.A. Chaugale



Shobha. Menon.

Signature & round seal

Name: Shobha. Menon

Designation: Principal

For the said Institute



Signature & round seal

Name: Mrs. F. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions

2. Compliance

The compliance study was carried out through investigative ways. This was done to understand the **extent of suggestions and their implementations based on previous report of Academic years 2019-2020 and 2020-2021**. The details of the suggestions are based on the Original Report dated 22 January 2022 is further documented below. It is based on the data collection process.

S. No.	Recommendation Title	Compliance Status
1.	Electromechanical systems	Partially implemented
2.	Facility management systems and controls	Partially started implementation

Table 2: Details of the compliance study

The information for the existing nos. of electrical appliances is documented below; there **has been an introduction of solar panels in the premises.**

➡ Lights – Source of electrical usage

- The lights are one of the appliances that can be energy efficient ones, the current data shows there has been a decrease in the overall nos. as they have reduced from **1,418 nos. (Previous)** to **1,169 nos. (Current)**.
- The LED lights consumption in previous year was **25.65% (Previous)** however it has been reduced to **19% (Current)**.
- The Non-LED lights consumption in previous year was **74.35% (Previous)** however it has been increased to **81% (Current)**.
- There has been an introduction of **sensor-based lights in 15 nos.**

➡ Fans – Source of electrical usage

- The ceiling fan nos. are the appliances that can be replaced with energy efficient ones, these have increased from **442 nos. (Previous)** to **459 nos. (Current)**.
- **However, there has not been any major difference in the overall kWh as the previous year calculated energy was 38,069 kWh whereas it stands today at 38,772 kWh.**

3. Evidences

The information shared by the Institute to support the documentations are listed below:

The screenshot shows the 'Info' tab of the COSMOPOLITAN ED... app. The header bar is orange with a back arrow, a green lightning bolt icon, the text 'COSMOPOLITAN ED...', a star icon, and a three-dot menu icon. Below the header, the ID 'ID:14BCB8' is displayed. The main content area has a light blue background and contains several sections:

- Overview, Device, Alarm, Info** (Tabs)
- Basic Information, Tariff Management, Linked Account** (Buttons)
- Guest** (Text)
- More Information** (Section Header)
- Plant Contact Phone** (Text)
- Install Business Mail Box** (Text)
- Installer Phone** (Text)
- Module** (Text)
- Grid Connection Type** (Text)
- Grid-connected Time** (Text)
- Azimuth** (Text)
- Inclination** (Text)
- Remark 1, Remark 2, Remark 3** (Text)

Plate 2: Details of the Solar system (Basic information)

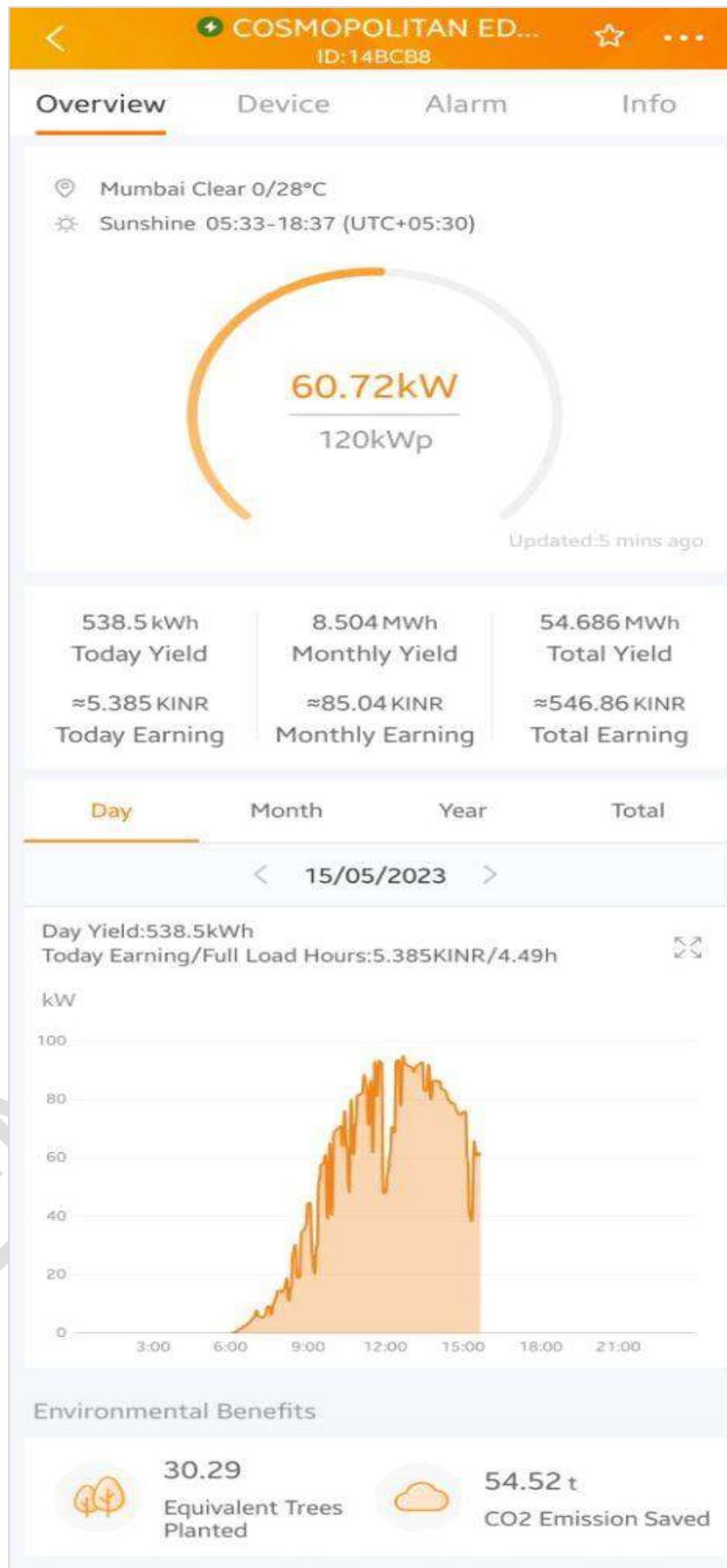



Plate 3: Details of the Solar system (Consumption information)

< COSMOPOLITAN ED... ID:14BCB8 ☆ ...

Overview Device Alarm Info

Basic Information Tariff Management Linked Account

E72.829600, N19.125100



Plant Name COSMOPOLITAN EDUCATION SOCIETY

Plant Type Commercial

Installed Capacity 120 kWp

Time Zone (UTC+05:30) Asia/Calcutta

Currency INR

Organization Code 98EDD1

Power-on Time ? --

Create Date 26/11/2022 14:03:57 (UTC+05:30)

Location Cluster_mumbai Suburban_688
T6x Prociltower, Andheri West, Mum...

Feed-in Tariff

Earning Per kWh 10INR/kWh

Linked Account

Owner Username Cosmopolitan Education Trust

Owner email cosmoprim@rediffmail.Com

Guest 1 >

More Information

Plant Contact Phone --

Plate 4: Details of the Solar system (Technical information)

4. Inferences

Recommendation related to 'entire Institute'

The following details are consolidated study recommendations related to 'entire Institute' and should be considered as **second priority** and should be implemented within 2.5 to 3.5 years from the date of the Report submission.

Smart gardening

The College can undertake a Smart Gardening system using IoT Technology. This will result in saving time by scheduling time for watering; saving money through automated water schedules tracking dampness of soil to know when, how much water garden needs.



Plate 5: Solar farm concept for the Institute (For reference purpose only)

Image source: <https://housing.com/news/smart-gardening/>

Data source: <https://www.happysprout.com/inspiration/what-is-smart-gardening/>

On-site investigation and physical verification

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



Group photo with core team including Principal Madam & Coordinator; Investigation of the rainwater harvesting pit



Investigation around the rain water harvesting pit, compost pit and backyard beautification



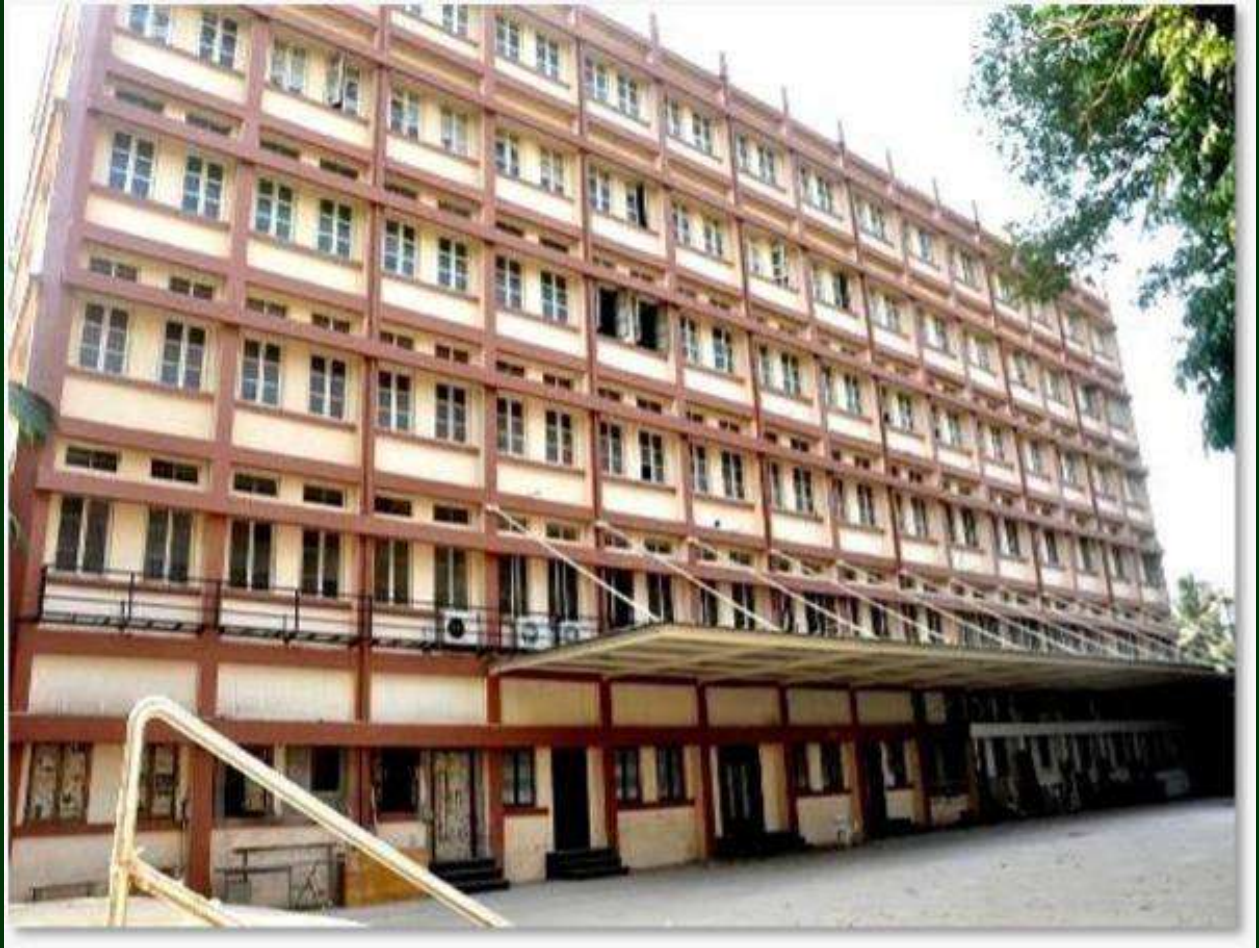
Students working on site for beautification and awareness through QR codes

5. 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.

Specific references for study related to energy

- ➔ <https://www.energy.gov/eere/buildings/zero-energy-buildings>
- ➔ <https://www.dsaarch.com/zero-net-positive-energy>
- ➔ U.S. Energy Information Administration



ENVIRONMENT AUDIT

STUDY PERIOD (TWO YEARS) 2021 – 2022 AND 2022 – 2023

Sustainability study

RENEWAL AUDIT REPORT

Studied for

Cosmopolitan Education Society's

**Valia Chhaganlal Laljibhai College of Commerce
& Valia Lilavantiben Chhaganlal College of Arts**

D. N. Nagar, Cosmopolitan Education Society Road,
Andheri (West), Mumbai - 400053

Studied in the capacity of

Accredited and Certified
Green Building Professional



Studied by

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

Email: greenviosolutions@gmail.com

Valid till **30 April 2024**

Disclaimer

The Audit Team has prepared this report for the **Cosmopolitan Education Society's Valia Chhaganlal Laljibhai College of Commerce & Valia Lilavantiben Chhaganlal College of Arts** located at D. N. Nagar, Cosmopolitan Education Society Road, Andheri (West), Mumbai – 400053, Maharashtra, India based on input data submitted by the College and analyzed 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 a 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 Hon'ble Management and College. 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 while 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 an Accredited and Certified Green Building Professional. 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 incapacity of an 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

Palghar District, Maharashtra- 401208

sustainableacademe@gmail.com

Acknowledgment

The Audit Assessment Team thanks the **Cosmopolitan Education Society's Valia Chhaganlal Laljibhai College of Commerce & Valia Lilavantiben Chhaganlal College of Arts, Maharashtra, India** 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 Chairperson of the entire process **1. Dr. Shobha Menon**, Principal for their valuable inputs.

We are also thankful to College's Task force who have extended their efforts towards the project - **Dr. Bageshree Bandekar, Mr. Arvind Panchal, Ms. Maitri Dave (Special mention for the excellent coordination); Mr. Shubham Katurde, Mr. Anil Talekar, Mr. Sadanand Sawant and Mr. Prabhakar Chougule.**

We highly appreciate the assistance of 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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Evidence documents for Site visit of external audit team


Audit team headed by external expert: Mr. Nahida Alsajida
Accredited & Certified Green Building Professional, ISO 14001 (IMS)
Audit objective: Green Building up gradation of the premises

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

Institute: Valia C.L. College Date: 15/05/2023

Document objective: Inferences of the Site visit

Observations (Positive aspects)	Suggestions (Improvement aspects)
Green Audit	
<ul style="list-style-type: none"> - Rain water harvesting - Bio-bin in place - Plastic & e-waste management practiced. 	<ul style="list-style-type: none"> - Aerators - Dual flush - 'NO' suggestion for waste management.
Energy Audit	
<ul style="list-style-type: none"> - Renewable energy has been implemented - Sensor based taps lights implemented. 	<ul style="list-style-type: none"> - Sensor based taps & hand dryers - Additional awareness posters
Environment Audit	
<ul style="list-style-type: none"> - Bird feeders - Fire & life safety practices - Trees planted & QR codes under process - Unmanned Aerial Vehicle refitted 	<ul style="list-style-type: none"> - Increase green cover on rooftop & vertical gardens (ducts, courtyards)


Shobha Menon
Signature & round seal
Name: Shobha Menon
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 About the Institute

The **Valia Chhaganlal Laljibhai College of Commerce and Lilavantiben Chhaganlal College of Arts** was established in **1986** under the aegis of the **Cosmopolitan Education Society**. The parent body, Cosmopolitan Education society was established in 1961, when a group of likeminded residents of D. N. Nagar came together, inspired by the idealism of establishing a quality educational institution in the locality.

The College has the mission **to provide value-based quality education and training in an environment conducive to intellectual, social and cultural enrichment to mould responsible citizens with a harmonious blend of Indian traditions and modern technology for a better tomorrow.**

1.2 Populace analysis

1.2.1 Students data

- The student data (shared by the College) shows there were a total of **1,298 male and 1,365 female students** thus **a total of 2,663 students** in the premises in the academic year 2021-2022.
- The student data (shared by the College) shows there were a total of **1,226 male and 1,367 female students** thus **a total of 2,593 students** in the premises in the academic year 2022-2023.

1.2.2 Staff data

- The staff data shows the premises had 22 male and 31 female staff members; thus a **total of 53 Staff Members** in the premises in the academic year 2021-2022.
- The staff data shows the premises had 27 male and 29 female staff members; thus a **total of 56 Staff Members** in the premises in the academic year 2022-2023.

1.3 Site and building spread area

The site area is **0.93 acres** and **built-up area is 93,051.78 sq. ft**

1.4 Accreditation of the Institute

The Institute has received the following:

- NAAC accreditation under process
- NIRF ranking – Annual participation

1.5 Academic arena

The College with a total **strength of more than 2,500 students** offers undergraduate and post graduate programs both under the grant in aid system as well as the self - financed system. The courses provided by the College are documented below:

1.5.1 Undergraduate courses

1. Bachelor of Commerce (B. Com)
2. Bachelor of Science Information Technology (B.Sc. IT)
3. Bachelor of Management Studies (B.M.S.)
4. Bachelor of Arts Multimedia and Mass Communication (B.A.M.M.C)
5. Bachelor of Commerce Accounting and Finance (B.Com A&F)

1.5.2 Post-Graduate courses

1. Masters of Science (Information Technology)
2. Masters of Science (M. Com)

1.6 Achievements of the Institute

The Institute has a tremendous track record of excellence in Built form and educational services provided, below are some of the achievements of the prestigious Institute.

S. no	Name of the activity	Name of the award	Name of the awarding body
Academic year 2021-2022			
1.	E-waste collection	Certificate & Letter of Appreciation	Threco The Recycling Company

2.	Handmade Greeting Cards for Indian Soldiers	Certificate of Appreciation	Making A Difference Foundation
3.	Beach Clean-up Drive at Madh-Island	Letter of Appreciation	Madh Island Welfare Association
4.	Advocacy and Talent Development Sessions	Letter of Appreciation	The Movement (India)
5.	Beach Clean-up Drive	Letter of Appreciation	United Way Mumbai
6.	Pulse Polio Immunization Drive	Letter of Appreciation	Municipal Corporation of Greater Mumbai (MCGM)
7.	Bottles for Change Programme	Certificate of Appreciation	Bisleri International Pvt. Ltd.
8.	Vaccination Drive	Letter of Appreciation	Brihanmumbai Municipal Corporation (BMC)
9.	Teaching Internship Program	Letter of Appreciation	Rajani Foundation (India)
Academic year 2022-2023			
10.	Environmental Education project	Certificate of Appreciation	United Way Mumbai
11.	Run for leprosy and Committing to health, Education and Development of India	IDF Best NSS Supporter Award	Indian Development Foundation (IDF)
12.	Beach Clean-Up Drive	Certificate of Appreciation	Jay Foundation
13.	Online Training of Organ Donation Drive	Certificate of Appreciation	V4organs Foundation
14.	Beach Clean-Up Drive	Letter of Appreciation	Madh Welfare Association
15.	E-waste collection	Certificate of Appreciation	Threco The Recycling Company
16.	Session on cyber security	Special Appreciation for Media Outreach	Cyber Siksha Champion of the year
17.	Plastic Collection and Submission Drive under Bottle for Change Project	Certificate of Appreciation	Bisleri International Pvt. Ltd.

Plate 1: Details of the awards received by the Institute

1.7 Industry Collaborations

The details of the collaborations with external partners are documented below:

S. No	Year	Name of the Organisation/ Institution
1	2021–2022	MOU with <i>Anudip Foundation</i>
2	2022-2023	MOU with <i>Technoserve</i>
3	2022-2023	MOU with <i>Durgadevi Saraf Institute of Management</i>
4	2022-2023	MOU with <i>Quick Heal</i>

Table 1: Details of the MoU signed by the Institute

1.8 Timeline of activities for research

As the College had undergone a renewal for the Academic year 2021-2022 and 2022-2023, data collection processes for verification purposes were asked to be submitted.

- ➔ Discussion with the College
- ➔ Allotment and Initiation by the College
- ➔ Process discussion with team
- ➔ Data submitted by College
- ➔ 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: Valia C. L. College

Date: 15/5/2023

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.	Dr. Shobha Menon	Internal College Committee	Principal	Shobha Menon
4.	Ms. Mairni Dave		Faculty	
5.	Dr. Bageshree P.B.B		ICAC Coordinator	P.B.B.
6.	Mr. Anil Talekar		Office Superintendent	Anil Talekar
7.	Mr. Probhakar Chougale		Campus Supervisor	P.A. Chougale



Signature & round seal
Name: Shobha Menon
Designation: Principal
For the said Institute



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

Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO 14 (IMS)
Audit objective: Green Building up gradation of the premises

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

Institute: Valia. C. L. College Date: 15/5/2023

Document objective: Exit 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.	Dr. Shobha. Menon	Internal college Committee	Principal	Shobha Menon
4.	Ms. Maithi Dave		Faculty	
5.	Dr. Bageshree. P.B.B		IOAC Coordinator	
6.	Mr. Anil. Talekar		Office Superintendent	
7.	Mr. Prabhakar Chaugale		Campus Supervisor	P.A. Chaugale



Shobha. Menon.

Signature & round seal

Name: Shobha. Menon

Designation: Principal

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



2. Compliance

The compliance study was carried out through investigative ways. This was done to understand the **extent of suggestions and their implementations based on previous report of Academic years 2019-2020 and 2020-2021.**

The details of the suggestions are based on the Original Report dated 22 January 2022 is further documented below. It is based on the data collection process.


A site visit was conducted at the site on Monday, 15 May 2023 and the following observations were noted w.r.t. suggestions provided as per previous audit.

Campus beautification through the following initiatives:

- ➔ Bird feeders
- ➔ Increase in green cover
- ➔ Reserved parking for the specially abled
- ➔ Retrofitting the toilet to make it user friendly for the specially abled
- ➔ QR codes on plants
- ➔ Improved fire and life safety systems
- ➔ Placards and manuals for awareness

3. Evidences

The information shared by the Institute to support the documentations are listed below:


NEOTM
ENTERPRISES
 CALMING FEARS, SAVING LIVES

Ref. No.: NE/B0186/2022-23 Date: 12/01/2023

FORM B
[See section 3(3) and rule 4(2)]

CERTIFICATE

Certified that I/We have carried out inspection of the Fire Prevention and Life Safety Measures installed in the following premises, namely:-

Building/Premises Address

**Cosmopolitan Education Society,
Valia College,
CES Road, D. N. Nagar,
Andheri West, Mumbai- 400 053.**

I/We further certify that these installations in the above-mentioned buildings are maintained in good repair and efficient conditions during the period **JULY 2022 to DEC 2022**, as required under the provisions of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 (MAH III of 2007). The Details of the inspection installations carried out by me/us are mentioned in the Annexure.

License No.:-
 Maharashtra Fire Services License No. MFS / LA / RF-52 / RD-53 / RP-15
 Dtd: 30/01/2022

For NEO ENTERPRISES

- Valia Ramniklal Chhaganlal Junior College of Commerce & Valia Lilavatiben Chhaganlal Junior College of Science & Valia Jayalaxmiben Jethalal Junior College of Arts
- Valia Chhaganlal Laljibhai College of Commerce & Valia Lilavatiben Chhaganlal College of Arts

**SHAILESH
D CHAVAN**

Authorized Signatory

Digitally signed by SHAILESH D CHAVAN
 DN: cn=, o=NEO ENTERPRISES,
 2.5.4.20221447081264163321115d77a02,
 5116027948030770440798899000,
 serialNumber=8636155A, c=IN, o=NEO ENTERPRISES,
 cn=SHAILESH D CHAVAN
 Date: 2023.01.12 17:01:39 +05'30'

Plate 2: Details of the Fire extinguishers



Date: 12/01/2023

Annexure

Sub: Fixed Fire Protection System at Building

**Cosmopolitan Education Society,
Valia College,
CES Road, D. N. Nagar,
Andheri West, Mumbai- 400 053.**

This is to certify that, the Fire Hydrant and Alarm System of above building/premises is maintained and is in good working condition.
Following are the details of the system.

Sr. No.	Equipment Details	Qty.
1.	Booster Pump	01 Nos.
2.	Landing Valve	10 Nos.
3.	Courtyard Valve	06 Nos.
4.	Hose Reel Drum Set	10 Nos.
5.	Hose Box Set	16 Nos.
6.	Fire Service Inlet 2 Way	01 Nos.
7.	Fire Alarm Panel	01 Nos.
8.	Smoke Detector	101 Nos.
9.	Manual Call Point	12 Nos.
10.	Sounder	12 Nos.

The Inbuilt Fire Protection System found in good condition on day of inspection.
Alternate power supply to be provided.

For NEO ENTERPRISES

**SHAILESH
D CHAVAN**

Digitally signed by SHAILESH D CHAVAN
DN: cn=IN, o=NEO ENTERPRISES,
ou=MANAGEMENT,
2.5.4.20=2c744b91af41b332141f6d77a
5548b1f4007794903c077b94d779f6689e
d, postalCode=410210, st=Maharashtra,
serialNumber=bb1b13f0ca11193b3bbel
7d5e11d7c67e67a73a154bb2b613cf315
96482bfce, cn=SHAILESH D CHAVAN
Date: 2023.01.12 17:01:51 -0800

Authorized Signatory

Plate 3: Details of the entire fire fighting system



**PRECISE
FIRE SERVICES**

**Dealers : Portable fire
extinguishers & Recharging
of Portable Fire Extinguishers**

321, A Wing, Shitladevi CHS, Opp. Indian Oil Nagar, Andheri (W), Mumbai - 400 053.
Mobile : 8451022102, 9892322445, 9820438967, 9082301001. Email: precisereservices@gmail.com

TO WHOMSOEVER IT MAY CONCERN

SPL/RCG / 22 - 23

Date: 05 / 08 / 2022

To, VALIA College,

D. N. Nagar, C. E. Society Road,

Andheri West,

Mumbai. 400053

The following **Fire Extinguishers** has/have been Recharged
by us on date 05 / 08 / 2022 Next date for recharging due on 04 / 08 / 2023

Sr. No.	Type of Extinguishers	Capacity	Quantity
1	Dry Powder Special Purpose (ABC Type)	6 kg	19 NOS
2	Dry Powder Special Purpose (ABC Type)	4 kg	12 NOS

For PRECISE FIRE SERVICES

N.B. : As per IS: 156837 & IS:2190 : Portable Fire Extinguishers are not expected to deal with large Fires since they are essentially first-aid Fire Fighting equipment. Nevertheless, they are very valuable in the early stages of fire when used promptly and effectiely.

Plate 4: Details of the refilling of fire extinguisher

4. Inferences

4.1 Section-wise recommendations

The following suggestions are to be considered as a **first priority** for implementation. These **should be executed within the next 1.5 to 2.5 years from the date of the Report submission.** The Institute can execute a plan after discussion with Project Head.

4.1.1 Site beautification

Child area - There can be one provision where if student's or staff relative who are toddlers or senior citizens can rest and this area could have facilities accordingly.

4.1.2 Heat island reduction

➔ **Cool rooftops** - It is suggested that the Institute gets the Terrace roofs painted with Cooltop as it will help reduce the temperature of the spaces.

4.1.3 Universally accessible premises

- ➔ **Resting places** - There should be increased provision for resting places on-premises outdoor and indoors.
- ➔ **Provisions for visually impaired - Signages** – In addition to the signages being in regular language there should be additional signages in braille language for the specially-abled students.
- ➔ **Provisions for visually impaired - Tactile flooring** – The indoor and outdoor of the premises should have dedicated tactile flooring for the visually impaired.
- ➔ **Provisions for visually impaired - Audio Visual Section** – There should be dedicated section for ther visually impaired students to listen to the audio books; Abrar the audio book reader should be available.

4.1.4 Pollution Control

- ➔ **Specific area designated for E-vehicles** – There should be designated area dedicated to E-vehicles parking and charging and this zone should be demarcated as 'Eco-Zone'
- ➔ **Promote the use of Eco-friendly vehicles** - There can be student and staff sensitization program on eco-friendly and battery-operated vehicles/ low emission vehicles for daily use.
- ➔ **Battery charging points for Eco-friendly vehicles** - There can be provision for battery charge points, this would inspire students to change their mode of transportation and adopt sustainable practices.
- ➔ **Bicycles as a gift** - As an appreciation gesture maybe the student's toppers/ staff best performers can be awarded a bicycle occasionally.

On-site investigation and physical verification

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



Group photo with core team including Principal Madam & Coordinator; Investigation of the rainwater harvesting pit



Investigation around the rain water harvesting pit, compost pit and backyard beautification



Students working on site for beautification and awareness through QR codes

5. 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

