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Shedung, Panvel

Environment Audit Report No: ENVA15042024



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## Acknowledgement

Elion Technologies and Consulting Pvt Ltd thanks the management of St. Wilfred's College of Law, Shedung, Panvel for assigning this important work of Environmental Audit. We appreciate the co-operation to our team for completion of study.

For giving us necessary inputs to carry out this very vital exercise of Environment Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

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## **Site Information**

| Name of College               | St. Wilfred's College of Law  |
|-------------------------------|---|
| College Address               | Near Shedung Toll Plaza, Old Mumbai Pune Highway,<br>Shedung, Panvel-410206 |
| Execution Partner             | ELION Technologies & Consulting Pvt Ltd                                     |
| Communication Address         | 307, 3rd Floor  |
|                               | DDA Lal Market  |
|                               | H-Block Vikas Puri, New Delhi - 110018                                      |
| Date of Audit                 | 15 <sup>th</sup> April 2024   |
| Year of Audit                 | 2023 - 2024   |
| Audit Participants            | Dr. RAJENDRA PANDITRAO MARATHE - Convener                                   |
|                               | Dr. HARSHAL ASHOK PAWAR – Member  |
|                               | Dr. MUSHTAQUE AHMAD SHAMSUDDIN SHAIKH- Member                               |
| Total Covered Area of College | 2768 Sq m   |
| Total Green Area              | 1200 Sq m   |

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## Concept

The term 'Environmental audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of Environmental Audit, many leading companies/ institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as:

"A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects."

The European Commission, in its proposed regulation on environmental auditing, has also adopted the ICC definition of Environmental Audit.

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## Introduction

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

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## **Overview of Campus**

St. Wilfred's College of Law is one of the Leading Law Colleges situated in Panvel. St. Wilfred's college of Law is committed to the advancement of knowledge and learning and is catering to become a center for excellence in legal studies. St. Wilfred's Education Society with a mission to bring out professionally competent lawyer of high caliber to suit the needs of the corporate and modern society.

St. Wilfred's College of Law aims at maintaining a high academic standard to equip the students with a profound knowledge of law and to make them think in term of achieving great heights in the realms of law. It has administrative block, academic block, moot court hall, seminar hall, computer laboratory.

#### Vision

Classes are directed by best teaching privilege in capacious classrooms which are well equipped for the comfort and convenience of the students.

#### Mission

- To nurture our intellectual capital through a perfect blend of the traditional as well as contemporary ways and means, for the comprehensive development of the society.
- To provide a conducive environment for proper harnessing latent talent of students and encourage them to take initiatives for the development of their personality.
- To sensitize learners towards inclusive social concerns, human rights, gender and environmental issues.

#### List of courses offered by the institute:

- BA.LLB (5 Year Course)
- Bachelor in Law [LL. B] (3 Year Course)

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# **Audit Objectives**

The broad aims/ benefits of the eco-auditing system would be -

- Environmental education through systematic environmental management approach
- Improving environmental standards
- Benchmarking for environmental protection initiatives
- Reduction in resource use
- Financial savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the college campus and its environment
- Enhancement of university profile
- Developing an environmental ethic and value systems in young people

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## **Executive Summary**

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

This is second environmental audit of campus for NACC affiliation; QS Program and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

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## **Environmental Audit - Questionnaire**

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- I. Waste Minimization and Recycling
- II. Greening
- III. Energy Conservation
- IV. Water Conservation
- V. Clean Air
- VI. Animal Welfare
- VII. Environmental Legislative
- VIII. General Practices

# Is any Environmental Audit conducted earlier?

#### What is the total permanent population of the Campus?

|  | Male | Female | Total |
|--|------|--------|-------|
| Students   | 411  | 306    | 717   |
| Teachers   | 12   | 16     | 28    |
| Non-Teaching Staff   | 02   | 08     | 09    |
| Sub Total  | 425  | 330    | 754   |
| Approximate Number of Visitors (Per day)                           |      |        |       |
| What is the total number of working days of your campus in a year? |      |        | 287   |

#### Where is the campus located?

The campus is located in Near Shedung Toll Plaza, Old Mumbai Pune Highway, Shedung, Panvel-410206.

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Which of the following are available in your campus?

| 1 | Garden area                 | Yes |
|---|-----------------------------|-----|
| 2 | Playground                  | Yes |
| 3 | Kitchen                     | No  |
| 4 | Toilets                     | Yes |
| 5 | Garbage Or Waste Store Yard | Yes |
| 6 | Laboratory                  | Yes |
| 7 | Canteen                     | Yes |
| 8 | Hostel Facility (Numbers)   | No  |
| 9 | Guest House                 | Yes |

## Which of the following are found near your campus?

| 1 | Municipal dump yard                      | YES |
|---|--|-----|
| 2 | Garbage heap                             | No  |
| 3 | Public convenience                       | YES |
| 4 | Sewer line                               | No  |
| 5 | Stagnant water                           | No  |
| 6 | Open drainage                            | No  |
| 7 | Industry – (Mention the type)            | No  |
| 8 | Bus / Railway station                    | Yes |
| 9 | Market / Shopping complex / Public halls | Yes |

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### I - WASTE MINIMIZATION AND RECYCLING

| 1. | Does your campus generate any waste?  If so, what are they?   | No   |
|----|---|--|
| 2. | What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)   | No   |
| 3. | How is the waste generated in the campus managed? By  1 Composting  2 Recycling  3 Reusing  4 Others(specify)                     | No   |
| 4. | Do you use recycled paper in campus?  | Yes  |
| 5. | Do you use reused paper in campus?  | Yes  |
| 6. | How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify. | Educational Workshops, community events, social media campaigns. |
| 7. | Can you achieve zero garbage in your campus? If yes, how?   | It can be achieved by Waste audit, reuse, recycle, compost       |

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## II - GREENING THE CAMPUS

| 1. | Is there a garden in your campus?   | Yes   |
|----|---|---|
| 2. | Do students spend time in the garden?                                       | Yes   |
| 3. | Total number of Plants in Campus  | Approx. 450   |
| 4. | Provide some names of trees and plants in the campus.                       | Rose plant, Aloe vera plant, Palm Tree,<br>Lily, Jasmin |
| 5. | Is the university campus have any Horticulture Department?                  | No  |
|    | If yes, number of Staff working in Horticulture Department?                 | -   |
| 6. | Number of Tree Plantation Drives organized by institute per annum. (If Any) | 01  |
| 7. | Number of Trees Planted in Last year.                                       | 60  |
|    | Survival Rate   | 60%   |
| 8. | Plant Distribution Program for Students and Community                       | Selection of Plants, Educational<br>Outreach            |
| 9. | Plant Ownership Program   | No  |

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### III - ENERGY

| 1. | List down ways that you use energy in your campus. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day. | Electricity         |
|----|--|---------------------|
| 2. | Are there any energy saving methods, equipments, techniques employed in your campus? If yes, please specify. If no, suggest some   | No                  |
| 3. | Give an estimate of number of lights installed in your campus along with numbers?  | LED bulbs- 13       |
| 4. | Are any alternative energy sources employed/ installed in your campus? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.          | Solar energy – 80KW |
| 5. | Do you run "switch off" drills at campus?  | No                  |
| 6. | Are your computers and other equipment's put-on power-saving mode?   | Yes                 |
| 7. | Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?                                  | No                  |

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## **IV - WATER CONSERVATION**

| 1. | List all the uses of water in your campus?  | <ol> <li>Drinking &amp; Cooking in canteen</li> <li>Irrigation for Garden</li> <li>Washing &amp; Cleaning</li> <li>Washrooms</li> </ol>            |
|----|---|--|
| 2. | How does your campus store water? (mention tanks with capacity) Are there any water saving techniques followed in your campus?  | The Institute has a overhead water<br>tank with capacity of 2000 liters to<br>meet its daily needs.  |
| 3. | If there is water wastage, specify why and how can the wastage be prevented/ stopped?   | Implemented a Water Loss Management Program (locate and repair leak)   |
| 4. | Locate the point of entry of water and point of exit of waste water in your campus.  Entry-  Exit-  | Entry – Ground Water  Exit – Through sewage line (Municipality)  |
| 5. | Write down few ways that could reduce the amount of water used in your campus?  | <ul> <li>Dual flushing system</li> <li>Locate and repair leak</li> <li>Water free urinals</li> <li>By using efficient sanitary fixtures</li> </ul> |
| 6. | Record water use from the campus water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many litres of water have been used. | Water meters are currently not installed in the Institute  |
| 7. | Does your campus harvest rain water? (Please explain the method and uses)   | Yes, ground water recharge through pits and trench for collecting diversion of rain water  |
| 8. | Is there any water recycling System.  | No   |

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### V - CLEAN AIR

| 1. | Are the Rooms in Campus are Well                            | Yes                       |          |                         |          |       |
|----|---|---------------------------|----------|-------------------------|----------|-------|
|    | Ventilated?   |                           |          |                         |          |       |
| 2. | Number of windows per room (aggregate value to be provided) | 02 per room               |          |                         |          |       |
| 3. | What is the ownership of the vehicles                       |                           | Yes      |                         |          |       |
|    | used by your institute? (Please Tick ✓ only one)            | - Operator-owned vehicles |          |                         |          |       |
|    |   | -                         | Institut | e-owned                 | vehicles |       |
|    |   | -                         |          | oination o<br>and opera | -        |       |
| 4. | Provide details of institute-owned motorized vehicles?      | Buses                     | Cars     | Vans                    | Other    | Total |
|    | No. of vehicles   | -                         | -        | -                       | -        | -     |
|    | No. of vehicles more than five years old                    | -                         | -        | -                       | -        | -     |
|    | No. of Air-conditioned vehicles                             | -                         | -        | -                       | -        | -     |
|    | PUC done  | -                         | -        | -                       | -        | -     |
| 5. | Specify the type of fuel used by your                       | Buses                     | Car      | rs V                    | ans      | Other |
|    | institute's vehicles:                                       |                           |          |                         |          |       |
|    | Diesel  | -                         | -        |                         |          |       |
|    | Petrol  | -                         | -        |                         | -        | -     |
|    | CNG   | -                         | -        |                         | -        | -     |
|    | LPG   | -                         | -        |                         | -        | -     |
|    | Electric  | -                         | -        |                         | -        | -     |
| 6. | Air Quality Monitoring Program (If Any)                     | No                        |          |                         |          |       |
| 7. | Students suffer from respiratory ailments? (If Any)         | No                        |          |                         |          |       |
| 8. | Details of Diesel/Gas Generator. (Rating & Make)            | • Gens                    | sets     |                         |          |       |

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#### VI – ANIMAL WELFARE

| 1. | List the animals (wild and domestic) found<br>on the campus (dogs, cats, squirrels, birds,<br>insects, etc.) (if any) | Birds and Squirrels are commonly found in campus. |
|----|---|---|
| 2. | How many dogs in your area have undergone Animal Birth Control - Anti Rabies (ABC - AR)?                              | No  |
| 3. | Does your campus have a Biodiversity  | No  |
|    | Programme or a KARUNA CLUB?   |   |

#### VII - ENVIRONMENTAL LEGISLATIVE COMPLIANCE

| 1. | Are you aware of any environmental Laws pertaining to different aspects of environmental management? | Yes   |
|----|--|---|
| 2. | Does your campus have any rules to protect the environment? List possible rules you could include.   | Yes, educate and raise awareness. Encourage recycling and upcycling |
| 3. | Dose Environmental Ambient Air Quality Monitoring conducted by the Campus?                           | Yes   |
| 4. | Dose Environmental Water and Wastewater Quality monitoring conducted by the Campus?                  | Yes   |
| 5. | Dose stack monitoring of DG sets conducted by the Campus?  | No  |
| 6. | Is any warning notice, letter issued by state government bodies?                                     | No  |
| 7. | Dose any Hazardous waste generated by the Campus? If yes explain its category and disposal method.   | No  |
| 8. | Dose any Bio medical waste generated by the Campus? If yes explain its category and disposal method. | No  |

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### VIII - GENERAL

| 1.  | Are you aware of any environmental Laws pertaining to different aspects of environmental management?           | Yes  |
|-----|--|--|
| 2.  | Does your campus have any rules to protect the environment? List possible rules you could include.             | Use natural cleaners Think reusable when you drink   |
| 3.  | What is the housekeeping schedule of garden and common areas in your campus?                                   | Daily  |
| 4.  | Are students and faculties aware of environmental cleanliness ways? If Yes Explain                             | Yes. By water conservation, recycle and dispose properly, switch to eco-friendly products. |
| 5.  | Does Important Days Like World<br>Environment Day, Earth Day, and Ozone<br>Day etc. celebrated in your Campus? | Yes  |
| 6.  | Does Campus participate in National and Local Environmental Protection Movement?                               | Yes  |
| 7.  | Does Campus have any Recognition/certification for environment friendliness?                                   | No   |
| 8.  | Does Campus use renewable energy?  | No   |
| 9.  | Does Institution conduct a   | Yes  |
|     | green/environmental audit of its campus?   |  |
| 10. | Has the institution been audited/<br>accredited by any other agency such as<br>NABL, NABET, TQPM, NAAC etc.?   | No   |

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## Recommendations

- Air Quality monitoring Programme should be implemented and Indoor air Quality Tests shall be carried out yearly.
- Water meters shall be installed for better monitoring of water usage in the college
- Environmental Water and wastewater quality monitoring shall be carried out yearly.
- Water recycling system shall be installed in the campus.
- Water efficient taps shall be used in the campus for saving the water.



# **Photographic Evidences**



College Main Gate



**Trees and Plantation** 

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## Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. Overall, large amount of campus is for landscaping. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for university campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. There are no major observations but recommendation is made in this report which would further strengthen the goal to achieve 100% environment friendly campus.

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## References

- The Environment [Protection] Act 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control of Pollution] Act 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control of Pollution] Act 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules 1982
- The Gas Cylinders Rules 2016 (Replaces the Gas Cylinder Rules 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

**End of Report** 

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#### **DISCLAIMER**

All information contained in this report is based on the data available and observations made during the audit. All recommendations made in this audit report should be duly evaluated by the management before implementation.

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