

Criterion - 6

Governance, Leadership and Management

NAAC-SSR (2nd Cycle)



ETERNAL UNIVERSITY

BARU SAHIB, SIRMOUR-173101

HIMACHAL PRADESH

6.5.3(7)

Environment, Green Audits



ETERNAL UNIVERSITY

BARU SAHIB, SIRMOUR-173101
HIMACHAL PRADESH



ETERNAL UNIVERSITY

BARU SAHIB, DISTT SIRMAUR, NEAR RAJGARH,
HIMACHAL PRADESH 173101

GREEN AUDIT REPORT

PREPARED BY
EHS ALLIANCE SERVICES

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AUDIT CERTIFICATE



CERTIFICATE NO. EHSAC48A

CERTIFICATE

PRESENTED TO

M/S ETERNAL UNIVERSITY

Baru Sahib, Distt Sirmaur, near Rajgarh, Himachal Pradesh, 173101

Has been assessed by EHS Alliance Services for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.



SIGNATURE



27.10.2021

DATE OF AUDIT

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Eternal University for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank Dr. Narinder Pal Singh, Dean Research (Volunteering) of the University for his Continuous Support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Dr. B. S. Sohal - Dean PGS

Dr. A. S. Ahluwalia – Pro Vice Chancellor

Dr. S. K. Sharma – Dean DKSGACA

Mr. Santosh Shukla – In-charge AHKS

Last but not the least; we would like to thank Dr. Davinder Singh, Hon'ble Vice Chancellor of Eternal University for giving us an opportunity to evaluate the environmental performance of the campus.



DISCLAIMER

EHS Alliance Services Audit Team has prepared this report for Eternal University based on input data submitted by the representatives of University complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express 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.

If you wish to distribute copies of this report external to your organisation, then all pages must be included.

EHS Alliance, its staff and agents shall keep confidential all information relating to your organisation and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.



Signature

LEAD AUDITOR

|| CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the University management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the college/university campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.

|| INTRODUCTION

Now days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

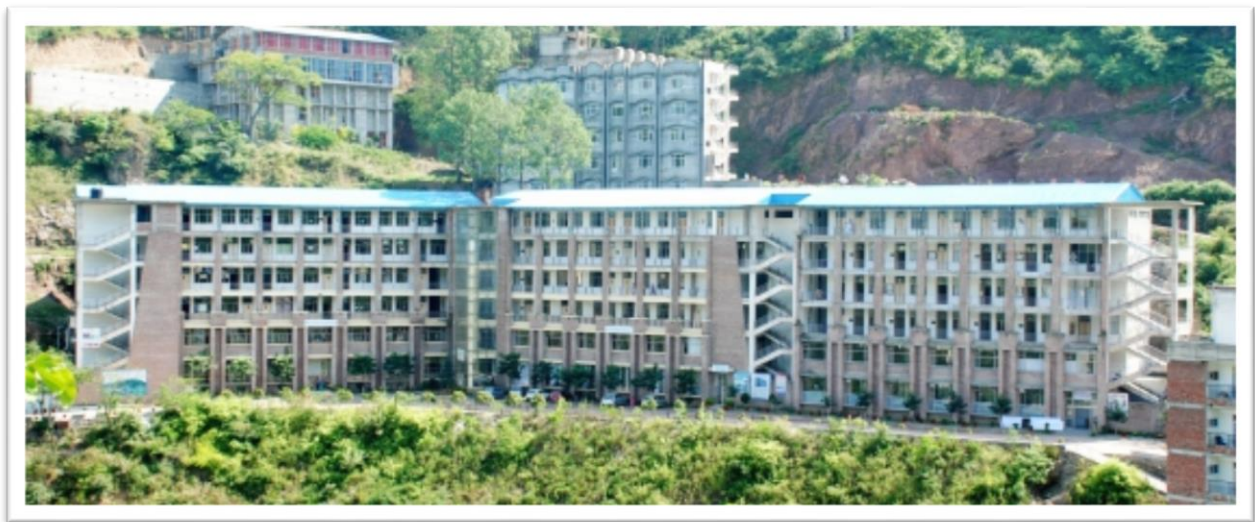
The activities carried out by the institution can also create adverse environmental impacts. Green audit is defined as an official inspection of the effects a University has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a University/college to determine how and where they are using the most of the energy or water or resources; the University can then decide how to implement changes and make savings. It can also be

used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of University/college including the assessment of policies, activities, documents and records.

|| OVERVIEW OF THE UNIVERSITY

Eternal university is NAAC Accredited & ISO 9001: 2015 Certified University established under the Himachal Pradesh Private University (Establishment & Regulation) Act 2006 & Himachal Pradesh Government Act.no. 3 of 2009, with the right to confer degree as per the UGC public notice on private Universities dated April 18, 2011.



The great visionary of 20th century (Sant Attar Singh Ji) had a vision that modern scientific education alone will not serve the humanity well, until and unless it is amalgamated with Brahm Vidya (Spiritual Education). The graduates of this unique education system will not only be outstanding in academics, but also will have high moral values (i.e. they will have love for humanity, compassion for the weak and the underdog, and sense of selfless service for the community). These graduates will work towards establishing permanent peace in the world. They will act as Ambassadors of Peace wherever they live, work and raise their families.

Eternal University with its seven constituent colleges is unique in imparting value based education to girl students and is the first private university of Himachal Pradesh to start College of Nursing, School of Public Health and College of Agriculture. Among several previous recognitions the Eternal University has been recently recognized as “The 20th Best Higher Education Institution in India, 2019 which are providing a broader perspective and cutting edge higher education with a focal point on fostering skills and innovation” by EDUCATION BRAINIAC magazine.



In a largely residential campus the day-scholar girl students from nearby areas of Sirmour district who could commute from home can now also pursue their studies in the Eternal University. Situated in the Valley of Divine Peace the Modern Gurukul is providing safest, drug and pollution free environment with facilities such as sports complex, gymnasium, NSS and NCC units, experimental farms, poly houses, modern dairy complex, solar power utilization systems and support for holistic development of its students. The Eternal University has organized several conferences, workshops, camps and Kisan Melas with emphasis to address the crucial problems of farmers of Sirmour and adjoining districts of Himachal Pradesh for their inclusive development.

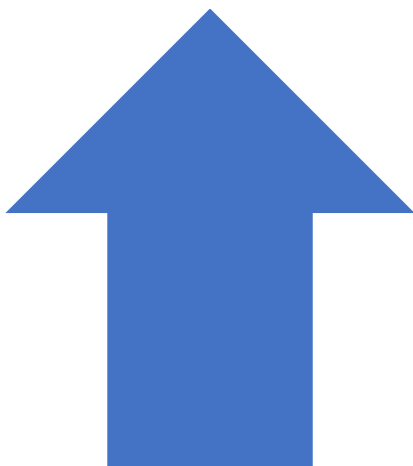


University offers 17 Bachelor programmes, 27 Master Programmes and 19 Doctorate Programmes.

Bachelor Programme	Masters Programme	Doctorate Programme
B.Sc. (Hons) Agriculture	M.Sc. Biotechnology	Ph.D. Biotechnology
B.Tech. Food Technology	M.Sc. Agronomy	Ph.D. Food Technology
B.Tech. CSE	M.Sc. Ag. Genetics & Plant Breeding	Ph.D. CSE
B.Sc. Information Technology	M.Sc. Ag. (Entomology)	Ph.D. Botany
B.Sc. Non-Medical	M.Sc. Ag. (Horticulture) Vegetable Science	Ph.D. Chemistry
B.Sc. (Hon.) Mathematics	M.Sc. Ag. (Horticulture) Fruit Science	Ph.D. Microbiology
B.Sc. (Hons.) Microbiology	M.Sc. Ag. Horticulture (Floriculture & Landscape Architecture)	Ph.D. Mathematics
B.Sc. (Hons.) Economics	M.Sc. Ag. Plant Pathology	Ph.D. Physics
B. Ed	M.Sc. Agricultural Economics	Ph.D. Zoology
B.Com (Hons.)	M.Sc. Food Science & Technology	Ph.D. Economics
B.B.A.New	M.Tech. Food Technology	Ph.D. Management
B.A. (Hons.) Music	M.Tech. CSE	Ph.D. English
B.A. Humanities	M.Sc. Botany	Ph.D. Music
B.Sc. (Hons.) Psychology	M.Sc. Chemistry	Ph.D. Public Health
B. Lib	M.Sc. Mathematics	Ph.D. Horticulture(Veg Science)
B.Sc. Medical		Ph.D. Agronomy
B.Tech. CSE		Ph.D. Entomology
Lateral/Migrated		Ph.D. Commerce
		Ph.D. Punjabi

	<p>M.Sc. Microbiology M.Sc. Physics M.Sc. Zoology M.P.H M.Sc. Economics M.Com. Master of Business Administration M.A. Music M.A. (Hons.) Punjabi M.Sc. Psychology M.A. English M.A. Education</p>	
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MISSION AND VISION OF ETERNAL UNIVERSITY



MISSION

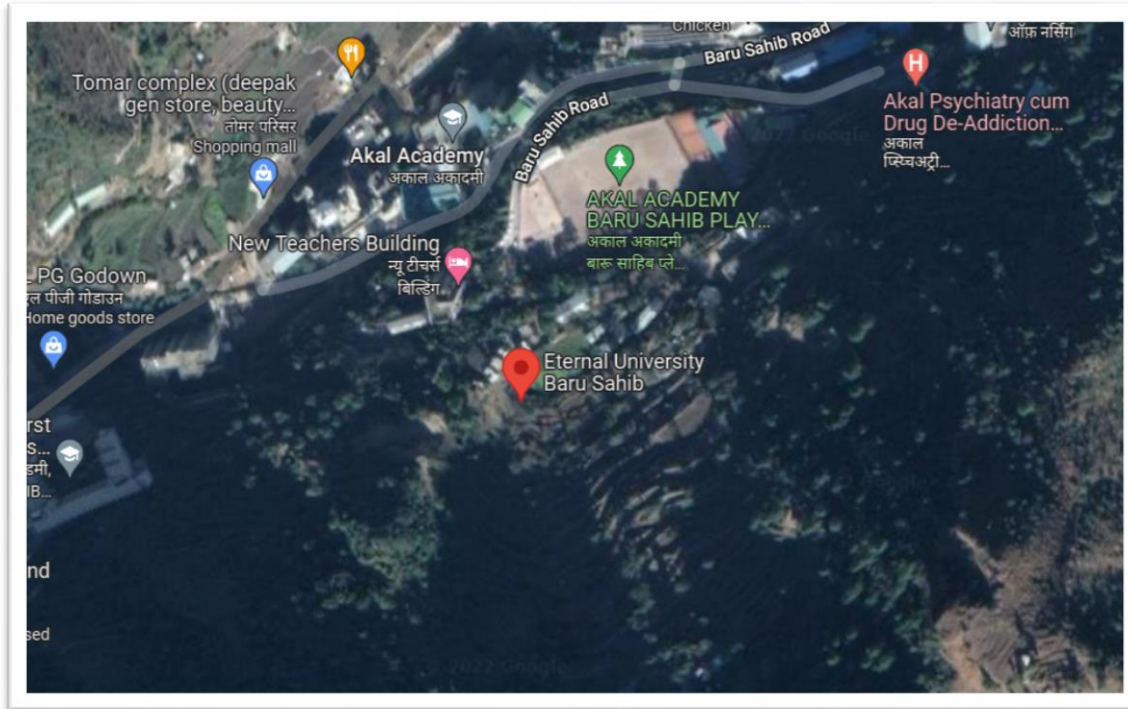
- "To transform and empower young women talent through cutting edge education in science, technology, arts and management amalgamated with spiritual rejuvenation for their holistic development to serve the mankind with compassion and love."



VISION

- "The relatively young Eternal University with its diverse programmes, priorities, commitments, values and efforts strives to emerge as a world-class women university with its centers of excellence in science, technology, arts and management. Major emphases will be focused on developing and strengthening industrial-institution linkages and harnessing strength of its alumni for skill development, technology transfer, resources generation and employment opportunities. Its graduates engrossed with holistic development, human values, professional ethics and skills and entrepreneurship will adapt and earn comfortable livelihood and serve the mankind with love and devotion for its inclusive and sustainable development as our ambassadors of universal brotherhood for world peace."

Geo Location



Geo Coordinates from Google maps: 30.753674, 77.296542

AUDIT PARTICIPANTS

On behalf of University

Name and Designation
<i>Dr. Narinder Pal Singh – Dean Research</i>
<i>Dr. B. S. Sohal - Dean PGS</i>
<i>Dr. S. K Sharma – Dean DKSGACA</i>
<i>Dr. A. S. Ahluwalia – Pro Vive Chancellor</i>
<i>Mr. Santosh Shukla – In-charge AHKS</i>

On behalf of EHS Alliance Services

Name	Position	Qualifications
<i>Dr. Uday Pratap</i>	<i>Lead Auditor</i>	<i>Ph.D. , PDIS, QCI – WASH, EMS Lead Auditor ISO 14001:2015</i>
<i>Pooja Kaushik</i>	<i>Co-Auditor</i>	<i>M.Sc., Field Expert, QCI – WASH</i>

|| EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the first attempt to conduct green audit of this university campus for fulfilment of NAAC criteria. This audit was mainly focused on greening indicators like consumption of energy in terms of electricity and fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the campus. Initially a questionnaire was shared to know about the existing resources of the campus and resource consumption pattern of the students and staffs in the university.

|| GREEN AUDIT – ANALYSIS

GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

No, This is first time a systematic way of monitoring their environmental eminence initiative taken by University for environment protection.

2. What is the total strength (people count) of the Institute?

Students

Male: 0 Female: 1170 Total: 1170

Teachers

Male: 56 Female: 58 Total: 114

Non-Teaching Staff

Male: 31 Female: 11 Total: 42

Total Count

Male: 87 Female: 1239 Total: 1326

3. What is the total number of working days of your campus in a year?

There are two hundred sixteen (216) working days in a year.

4. Where is the campus located?

The campus is located at Baru Sahib, Distt Sirmaur, near Rajgarh, Himachal Pradesh 173101

5. Which of the following are available in your institute?

<i>Garden area</i>	<i>Available</i>
<i>Playground</i>	<i>No</i>
<i>Kitchen</i>	<i>Available</i>
<i>Toilets</i>	<i>Available</i>
<i>Garbage Or Waste Store Yard</i>	<i>Available</i>
<i>Laboratory</i>	<i>Yes</i>
<i>Canteen</i>	<i>Available</i>
<i>Hostel Facility</i>	<i>Yes</i>
<i>Guest House</i>	<i>Yes</i>

6. Which of the following are found near your institute?

<i>Municipal dump yard</i>	<i>Not in vicinity of institute</i>
<i>Garbage heap</i>	<i>No Garbage heaps</i>
<i>Public convenience</i>	<i>Public convenience is available</i>
<i>Sewer line</i>	<i>500 m sewer line within campus</i>
<i>Stagnant water</i>	<i>No stagnant water</i>
<i>Open drainage</i>	<i>No</i>
<i>Industry – (Mention the type)</i>	<i>No</i>
<i>Bus / Railway station</i>	<i>Baru Sahib, Bus stand</i>
<i>Market / Shopping complex</i>	<i>No</i>

WASTE MINIMIZATION AND RECYCLING

1. Does your institute generate any waste? If so, what are they?

Yes, Solid waste Canteen waste, paper, plastic, horticulture, etc.

2. What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)

*Biodegradable waste - 550 Kg
Non-biodegradable waste - 700 Kg
Hazardous Waste - 2 Kg*

3. How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)

*Reuse of one side printed Paper for internal communication.
Sewage water is treated by STP with capacity of 1000 KLD.
Lab waste and medical waste is being treated using ETP of capacity 35 KLD
Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste.
Solid waste is segregated and recycled in waste management plant.
Composting is done for horticulture waste management.*

4. Do you use recycled paper in institute?

Yes, university uses the one sided printed paper.

5. How would you spread the message of recycling to others in the community?

Various campaigns and webinars by Students to increase awareness

6. Can you achieve zero garbage in your institute? If yes, how?

Yes, by using RRR (Reduce, Reuse and Recycle)

GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 392040 Sq. feet areas are developed as Gardens.

2. Do students spend time in the garden?

2-4 Hours during winters

3. Total number of Plants in Campus?

<i>Plant type with approx. count</i>	
<i>Full grown Trees</i>	<i>1656</i>
<i>Small Trees</i>	<i>1261</i>
<i>Hedge Plants</i>	<i>4410</i>
<i>Grass Cover SQM</i>	<i>36421.71 sqm</i>

4. Is the university campus having any Horticulture Department? (If yes, give details)

Yes, Total 05 staff deployed in horticulture

5. How many Tree Plantation Drives organized by campus per annum?

Annually, around 6 times Tree Plantation Drives are Organized by university. Total 1430 trees and hedge plants planted in this Financial Year with more than 80% survival rate.

6. Is there any Plant Distribution Program for Students and Community?

Yes, Saplings are distributed to Students and visitors at various Occasions. Besides this landscape of some area in city are developed by Institute. (photographs attached in annexure 1)

8. Is there any Plant Ownership Program?

NA

WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 38.2 KL/month

Gardening – 0 KL/month

Kitchen and Toilets – 251.8 KL/month

Others – 113.9 KL/month

Hostel – 3580.2 KL/Month

Total = 3984.1 KL/Month

2. How does your institute store water? Are there any water saving techniques followed in your institute?

Storage: Water is stored in multiple water tanks situated at the roof of building and then it is transferred to different areas of the university to fulfill the water requirement for different purposes.

Saving Techniques: Avoid overflow of water controlled valves are provided in water supply system. Close supervision for water supply system.

3. Locate the point of entry of water and point of exit of waste water in your institute.

Point of Entry - Natural Spring Water

Point of Exit –

1. From Canteen, Toilets, bathrooms by covered drainage which is connected to (1000

KLD) STP in campus area.

2. From labs and medicals, to STP (35 KLD)
And, then, transferred to the Agriculture Farms

4. Write down ways that could reduce the amount of water used in your institute

Basic ways:

- Close the taps after usage
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- Water Conservation awareness for new students
- Initiate the installations of water less urinals

ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Birds, Dogs, Cats, Cows and Squirrels are commonly found in campus. A variety of bird's species and other flora and fauna available, so institute doing their bit for its conservation.

University has veterinary doctor for animal welfare

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

Yes, SDG committee actively organizes awareness through campaigns and poster competition.

CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year CO2 emission

(electricity used per year in kWh/1000) x 0.84

168111.07 kWh/1000 x 0.84

=168111.07/1000x0.84

=141.21 tons

2. Per year CO₂ emission from LPG used for cooking in Hostel and Canteen or Mess

(LPG used per year in kWh/1000) x 0.84

165325.49 kWh/1000 x 0.84

=165325.49/1000x0.84

=138.87 tons

3. Per year CO₂ emission from Diesel used in DG sets as alternate energy source

(electricity used per year in kWh/1000) x 0.84

28811.36kWh/1000 x 0.84

=28811.36/1000x0.84

=24.20 tons

4. Transportation per year (Bus) CO₂ emission from transportation (Bus)

(Number of the shuttle bus in our University x total shuttle bus service each day x approximate distance travelled by the vehicle inside the campus in kilometers x 216 /100) x 0.01

=5x2x1x216/100x0.01

=0.22 tons

**216 working days per year, 0.01 is the coefficient to calculate the emission in metric tons per 100*

5. Transportation per year (car) CO₂ emission from transportation (car)

(Number of cars entering University campus x 2 x approximate distance travelled by the vehicle inside the campus in kilometers x 225/100) x 0.02

=10x2x2x216/100x0.02

=1.73 tons

Total CO₂ emission per year cumulative by electricity usage + LPG usages + Diesel usage + bus transportation + car transportation (141.21+138.87+24.20+ 0.22+1.73) = **306.24 tons**

Carbon absorption by flora in the institution

There are 1656 full grown trees and 1261 semi grown trees of different species, on the campus spread over 45 Bighas.

Carbon absorption capacity of one full grown tree 22 kg CO₂ Therefore Carbon absorption capacity of 1656 full-grown trees $1656 \times 22 \text{ kg CO}_2 = 36432 \text{ kg of CO}_2 = 36.43 \text{ tons of CO}_2$.

The carbon absorption capacity of 1261 semi-grown trees is 40% of that of full-grown trees. Hence the carbon absorption $1261 \times 6.8 \text{ kg of CO}_2 = 8574.80 \text{ kg of CO}_2 = 8.57 \text{ tons of CO}_2$

There are approximately Hedge Plants 4410 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO₂ where as some others absorb very low level of CO₂. In the absence of a detailed scientific study, 200g of CO₂ absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is $4410 \times 200 \text{ g} = 882 \text{ kg} = 0.88 \text{ tons of CO}_2$

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 302040 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area $302040 \times 365 \times 0.1 \text{ g CO}_2 = 14309.46 \text{ kg CO}_2$ per year, Total carbon absorption per year is 14.31 tons of CO₂.

Grand total of carbon absorption capacity of the campus is 60.20 tons. University is doing their best towards carbon neutrality.

SOLAR INSTALLATION DETAILS

The Solar Water Heater system at Eternal University comprises of 2 types a) Flat Plate Collector b) Evacuated Tube Collector. The total capacity is 18000 litres per day. There are 3 water tanks connected to the system. The total capacity of Water tanks is 11000 Litres. Heated water is used for the purpose of bathing in the hostel and cooking in the kitchen.

SOLAR PV SYSTEM 200 KWP

This Solar PV Plant was installed in year 2012 under the subsidy scheme of Ministry of New and Renewable Energy. It was one of the highest Solar PV Installation worked under the scheme. The plant has 800 Solar Plates of size 250 Wp each. 4 Inverters of size 50 kWp each convert the DC electricity into the AC electricity. The produced electricity from the plant is fed into the Distribution system for the electrification inside the buildings.

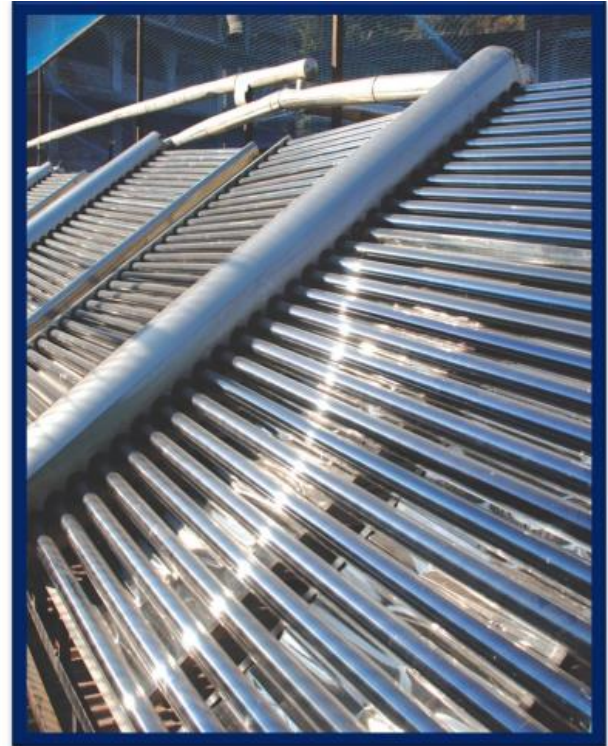


SOLAR WATER HEATER

The Solar Water Heater system at Eternal University comprises of 2 types

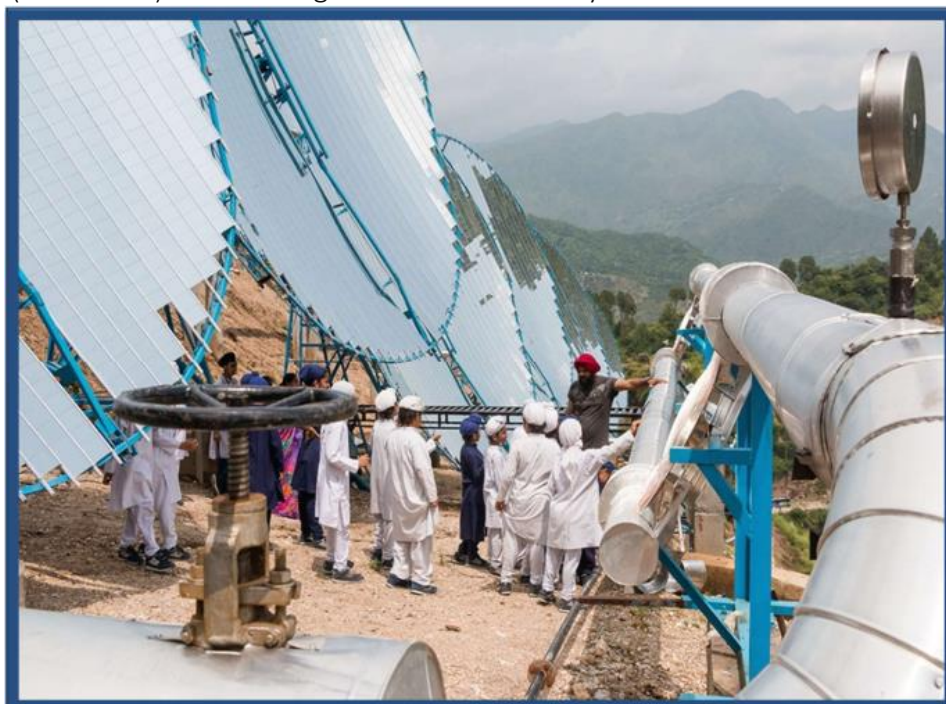
- a) Flat Plate Collector
- b) Evacuated Tube Collector

The total capacity is 18000 liters per day. There are 3 water tanks connected to the system. The total capacity of Water tanks is 11000 Liters. Heated water is used for the purpose of bathing in the hostel and cooking in the kitchen.



CONCENTRATED SOLAR THERMAL SYSTEM (CST)

CST Plants in the Campus is used for the community cooking for 5500 persons. It was one of the largest plant in the North India at the time of Installation in the year 2017. CST plant utilizes the thermic fluid for its operation for the necessary generation of the steam, which is utilized in the cooking. The Net impact of the CST Plant results in saving of 18250 LPG cylinders in a year. Each cylinder being 19 kg, therefore total $(18250 \times 19) = 346750$ kg of LPG is saved in a year.



GREEN INITIATIVES BY CAMPUS

- **Renewable Energy** - Solar power plant of capacity 200 KW is installed on building roof and hills that will supply approx. 50-60% of total power in campus.
- **Biodiversity Conservation** – Flora and fauna conservation program and awareness campaign organised as per the local geography.
- **Tree Plantation Drives** - Six Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.
- **Air Pollution Reduction** - Personal Vehicles (Students) not allowed at campus and university provides Bicycle in campus area.
- **Traditional Bulb to LED** - University has installed 1060 LED bulbs/ Tube light as replacement of traditional lighting system.
- **Solid Waste Management** -Waste segregation & management using Waste treatment plant, STP & ETP.
- **Environment Committee** – SDG committee/Environment committee is headed by Dr. Pritesh Vyas
- **Recycling The Waste** – University is converting waste plastic into bricks and pots, and they recycle used papers to make file covers.
- **Drip Irrigation Technique** – University garden committee has adopted this technique to save water.

RECOMMENDATIONS

- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- University should go for water balancing / audit for monitoring the use and wastage of water.
- Increase in display of environment conscious poster/paintings/slogans in the building for spreading awareness amongst students.
- “Save Energy” and “Save Water” Messages should be displayed at various locations to aware the students and staff about energy savings and water savings.
- Eco-friendly parameters should be included in the purchase of articles and goods for the university campus.
- Solar powered street lights and LED display board should be there in university campus
- Reduction in use of paper work by go digital system for teaching and examinations.
- Usage of curtains should be restricted in day time in order to get maximum natural light in classrooms.
- Dishwasher and washing machines should be adopted in mess and hostel to save water.

Transparency of Green Audit Report

Green audit report is one of the useful means of demonstrating an organization's commitment to openness and transparency. If an Organisation believes it has nothing to hide from its stakeholders, then it should feel confident enough to make its green audit reports freely available to those who request them. As a basic rule, green audit reports should be made available to all stakeholders.

|| CONCLUSION

This audit involved extensive consultation with all the Eternal University team, interactions with key personnel on wide range of issues related to Environmental aspects. Eternal University has SDG Committee for sustainable use of resources. Overall 80% of University campus is for landscaping. The audit has identified several observations for making the campus premise more environment 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 few things are important to initiate urgently are installation of water meters and water balancing report.

|| REFERENECE:

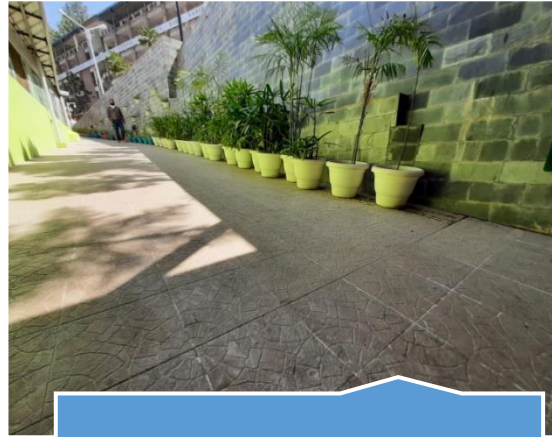
- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The 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



ANNEXURE – ENVIRONMENT CONSOUSNESS PHOTOGRAPHS



Lush Green Campus



Neat and Clean Campus



Air Purifying Plants



Air Purifying Plants



Indoor Plants



Indoor Plants



Seminar on Sustainability



Ozone Day Celebration



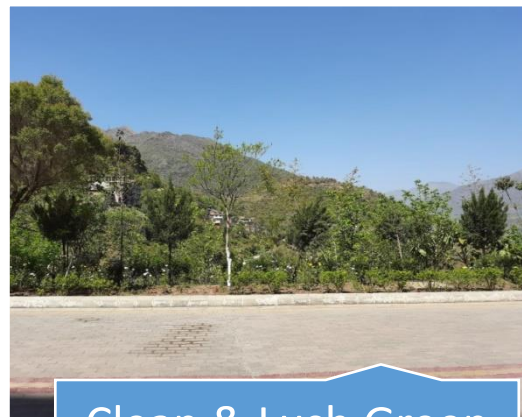
Solar Utility Training to Villegers



Pollution Awareness Campaign



Pavers used in campus



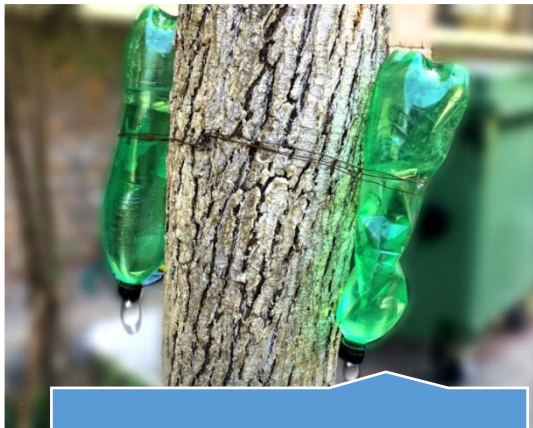
Clean & Lush Green Campus



Plantation Drive by Students



Plantation Drive by Students



Drip Irrigation to Save Water



Windows as per NBC Guidelines



Ventilated Class Rooms



Green Building Design

***** END OF THE REPORT *****



ETERNAL UNIVERSITY

BARU SAHIB, DISTT SIRMAUR, NEAR RAJGARH,
HIMACHAL PRADESH 173101

GREEN AUDIT REPORT

PREPARED BY
EHS ALLIANCE SERVICES

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AUDIT CERTIFICATE



CERTIFICATE NO. EHSAC48A

CERTIFICATE

PRESENTED TO

M/S ETERNAL UNIVERSITY

Baru Sahib, Distt Sirmaur, near Rajgarh, Himachal Pradesh, 173101

Has been assessed by EHS Alliance Services for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.



SIGNATURE



27.10.2021
DATE OF AUDIT

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Eternal University for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank Dr. Narinder Pal Singh, Dean Research (Volunteering) of the University for his Continuous Support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Dr. B. S. Sohal - Dean PGS

Dr. A. S. Ahluwalia – Pro Vice Chancellor

Dr. S. K. Sharma – Dean DKSGACA

Mr. Santosh Shukla – In-charge AHKS

Last but not the least; we would like to thank Dr. Davinder Singh, Hon'ble Vice Chancellor of Eternal University for giving us an opportunity to evaluate the environmental performance of the campus.



DISCLAIMER

EHS Alliance Services Audit Team has prepared this report for Eternal University based on input data submitted by the representatives of University complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express 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.

If you wish to distribute copies of this report external to your organisation, then all pages must be included.

EHS Alliance, its staff and agents shall keep confidential all information relating to your organisation and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.



Signature

LEAD AUDITOR

|| CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the University management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the college/university campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.

|| INTRODUCTION

Now days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

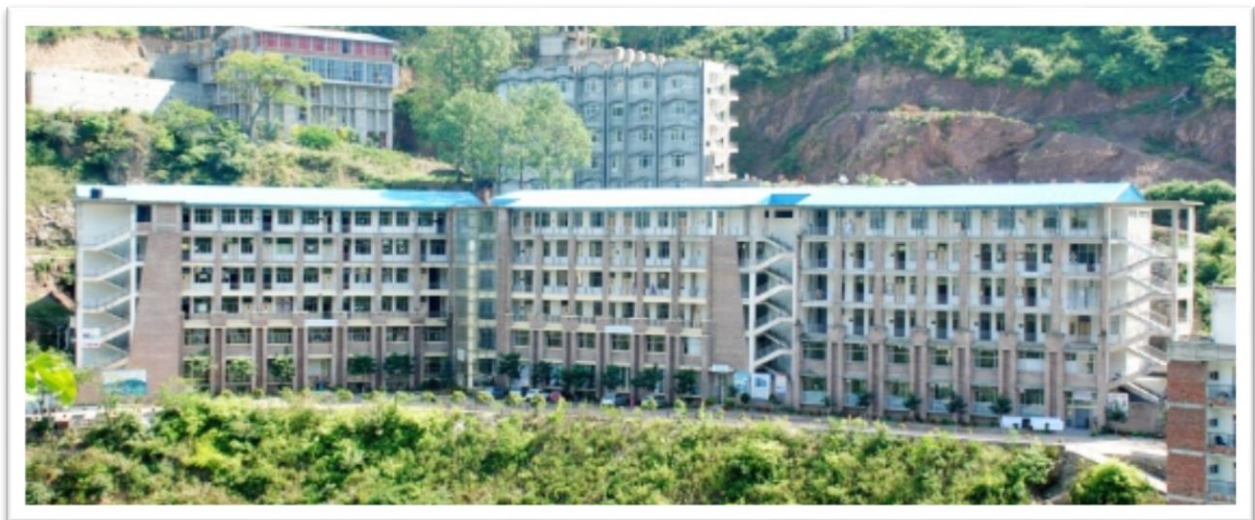
The activities carried out by the institution can also create adverse environmental impacts. Green audit is defined as an official inspection of the effects a University has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a University/college to determine how and where they are using the most of the energy or water or resources; the University can then decide how to implement changes and make savings. It can also be

used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of University/college including the assessment of policies, activities, documents and records.

|| OVERVIEW OF THE UNIVERSITY

Eternal university is NAAC Accredited & ISO 9001: 2015 Certified University established under the Himachal Pradesh Private University (Establishment & Regulation) Act 2006 & Himachal Pradesh Government Act.no. 3 of 2009, with the right to confer degree as per the UGC public notice on private Universities dated April 18, 2011.



The great visionary of 20th century (Sant Attar Singh Ji) had a vision that modern scientific education alone will not serve the humanity well, until and unless it is amalgamated with Brahm Vidya (Spiritual Education). The graduates of this unique education system will not only be outstanding in academics, but also will have high moral values (i.e. they will have love for humanity, compassion for the weak and the underdog, and sense of selfless service for the community). These graduates will work towards establishing permanent peace in the world. They will act as Ambassadors of Peace wherever they live, work and raise their families.

Eternal University with its seven constituent colleges is unique in imparting value based education to girl students and is the first private university of Himachal Pradesh to start College of Nursing, School of Public Health and College of Agriculture. Among several previous recognitions the Eternal University has been recently recognized as “The 20th Best Higher Education Institution in India, 2019 which are providing a broader perspective and cutting edge higher education with a focal point on fostering skills and innovation” by EDUCATION BRAINIAC magazine.



In a largely residential campus the day-scholar girl students from nearby areas of Sirmour district who could commute from home can now also pursue their studies in the Eternal University. Situated in the Valley of Divine Peace the Modern Gurukul is providing safest, drug and pollution free environment with facilities such as sports complex, gymnasium, NSS and NCC units, experimental farms, poly houses, modern dairy complex, solar power utilization systems and support for holistic development of its students. The Eternal University has organized several conferences, workshops, camps and Kisan Melas with emphasis to address the crucial problems of farmers of Sirmour and adjoining districts of Himachal Pradesh for their inclusive development.

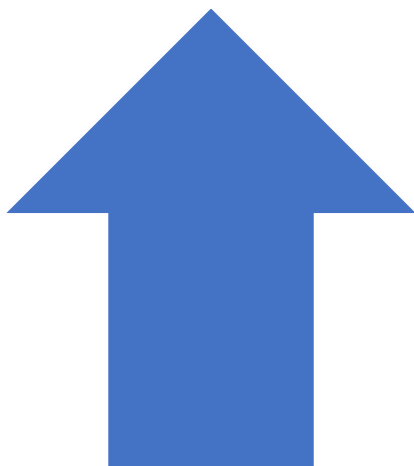


University offers 17 Bachelor programmes, 27 Master Programmes and 19 Doctorate Programmes.

Bachelor Programme	Masters Programme	Doctorate Programme
B.Sc. (Hons) Agriculture	M.Sc. Biotechnology	Ph.D. Biotechnology
B.Tech. Food Technology	M.Sc. Agronomy	Ph.D. Food Technology
B.Tech. CSE	M.Sc. Ag. Genetics & Plant Breeding	Ph.D. CSE
B.Sc. Information Technology	M.Sc. Ag. (Entomology)	Ph.D. Botany
B.Sc. Non-Medical	M.Sc. Ag. (Horticulture) Vegetable Science	Ph.D. Chemistry
B.Sc. (Hon.) Mathematics	M.Sc. Ag. (Horticulture) Fruit Science	Ph.D. Microbiology
B.Sc. (Hons.) Microbiology	M.Sc. Ag. Horticulture (Floriculture & Landscape Architecture)	Ph.D. Mathematics
B.Sc. (Hons.) Economics	M.Sc. Ag. Plant Pathology	Ph.D. Physics
B. Ed	M.Sc. Agricultural Economics	Ph.D. Zoology
B.Com (Hons.)	M.Sc. Food Science & Technology	Ph.D. Economics
B.B.A.New	M.Tech. Food Technology	Ph.D. Management
B.A. (Hons.) Music	M.Tech. CSE	Ph.D. English
B.A. Humanities	M.Sc. Botany	Ph.D. Music
B.Sc. (Hons.) Psychology	M.Sc. Chemistry	Ph.D. Public Health
B. Lib	M.Sc. Mathematics	Ph.D. Horticulture(Veg Science)
B.Sc. Medical		Ph.D. Agronomy
B.Tech. CSE		Ph.D. Entomology
Lateral/Migrated		Ph.D. Commerce
		Ph.D. Punjabi

	<p>M.Sc. Microbiology M.Sc. Physics M.Sc. Zoology M.P.H M.Sc. Economics M.Com. Master of Business Administration M.A. Music M.A. (Hons.) Punjabi M.Sc. Psychology M.A. English M.A. Education</p>	
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MISSION AND VISION OF ETERNAL UNIVERSITY



MISSION

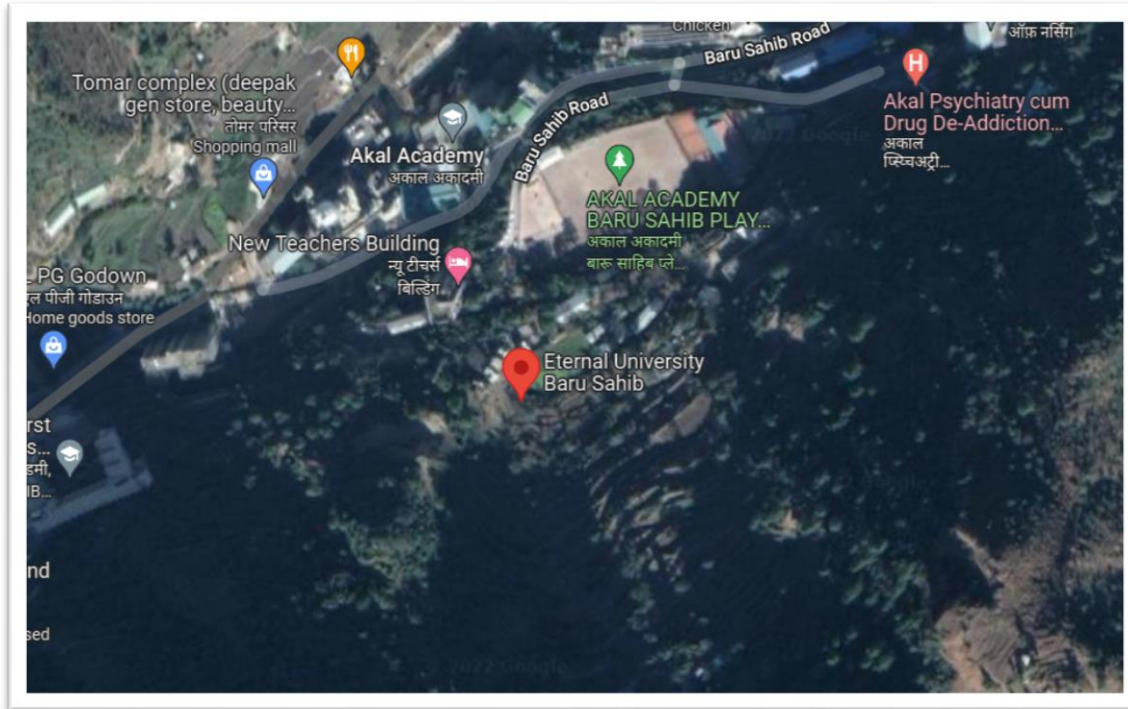
- "To transform and empower young women talent through cutting edge education in science, technology, arts and management amalgamated with spiritual rejuvenation for their holistic development to serve the mankind with compassion and love."



VISION

- "The relatively young Eternal University with its diverse programmes, priorities, commitments, values and efforts strives to emerge as a world-class women university with its centers of excellence in science, technology, arts and management. Major emphases will be focused on developing and strengthening industrial-institution linkages and harnessing strength of its alumni for skill development, technology transfer, resources generation and employment opportunities. Its graduates engrossed with holistic development, human values, professional ethics and skills and entrepreneurship will adapt and earn comfortable livelihood and serve the mankind with love and devotion for its inclusive and sustainable development as our ambassadors of universal brotherhood for world peace."

Geo Location



Geo Coordinates from Google maps: 30.753674, 77.296542

AUDIT PARTICIPANTS

On behalf of University

Name and Designation
<i>Dr. Narinder Pal Singh – Dean Research</i>
<i>Dr. B. S. Sohal - Dean PGS</i>
<i>Dr. S. K Sharma – Dean DKSGACA</i>
<i>Dr. A. S. Ahluwalia – Pro Vive Chancellor</i>
<i>Mr. Santosh Shukla – In-charge AHKS</i>

On behalf of EHS Alliance Services

Name	Position	Qualifications
<i>Dr. Uday Pratap</i>	<i>Lead Auditor</i>	<i>Ph.D. , PDIS, QCI – WASH, EMS Lead Auditor ISO 14001:2015</i>
<i>Pooja Kaushik</i>	<i>Co-Auditor</i>	<i>M.Sc., Field Expert, QCI – WASH</i>

EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the first attempt to conduct green audit of this university campus for fulfilment of NAAC criteria. This audit was mainly focused on greening indicators like consumption of energy in terms of electricity and fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the campus. Initially a questionnaire was shared to know about the existing resources of the campus and resource consumption pattern of the students and staffs in the university.

GREEN AUDIT – ANALYSIS

GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

No, This is first time a systematic way of monitoring their environmental eminence initiative taken by University for environment protection.

2. What is the total strength (people count) of the Institute?

Students

Male: 0 Female: 1170 Total: 1170

Teachers

Male: 56 Female: 58 Total: 114

Non-Teaching Staff

Male: 31 Female: 11 Total: 42

Total Count

Male: 87 Female: 1239 Total: 1326

3. What is the total number of working days of your campus in a year?

There are two hundred sixteen (216) working days in a year.

4. Where is the campus located?

The campus is located at Baru Sahib, Distt Sirmaur, near Rajgarh, Himachal Pradesh 173101

5. Which of the following are available in your institute?

<i>Garden area</i>	<i>Available</i>
<i>Playground</i>	<i>No</i>
<i>Kitchen</i>	<i>Available</i>
<i>Toilets</i>	<i>Available</i>
<i>Garbage Or Waste Store Yard</i>	<i>Available</i>
<i>Laboratory</i>	<i>Yes</i>
<i>Canteen</i>	<i>Available</i>
<i>Hostel Facility</i>	<i>Yes</i>
<i>Guest House</i>	<i>Yes</i>

6. Which of the following are found near your institute?

<i>Municipal dump yard</i>	<i>Not in vicinity of institute</i>
<i>Garbage heap</i>	<i>No Garbage heaps</i>
<i>Public convenience</i>	<i>Public convenience is available</i>
<i>Sewer line</i>	<i>500 m sewer line within campus</i>
<i>Stagnant water</i>	<i>No stagnant water</i>
<i>Open drainage</i>	<i>No</i>
<i>Industry – (Mention the type)</i>	<i>No</i>
<i>Bus / Railway station</i>	<i>Baru Sahib, Bus stand</i>
<i>Market / Shopping complex</i>	<i>No</i>

WASTE MINIMIZATION AND RECYCLING

1. Does your institute generate any waste? If so, what are they?

Yes, Solid waste Canteen waste, paper, plastic, horticulture, etc.

2. What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)

*Biodegradable waste - 550 Kg
Non-biodegradable waste - 700 Kg
Hazardous Waste - 2 Kg*

3. How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)

*Reuse of one side printed Paper for internal communication.
Sewage water is treated by STP with capacity of 1000 KLD.
Lab waste and medical waste is being treated using ETP of capacity 35 KLD
Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste.
Solid waste is segregated and recycled in waste management plant.
Composting is done for horticulture waste management.*

4. Do you use recycled paper in institute?

Yes, university uses the one sided printed paper.

5. How would you spread the message of recycling to others in the community?

Various campaigns and webinars by Students to increase awareness

6. Can you achieve zero garbage in your institute? If yes, how?

Yes, by using RRR (Reduce, Reuse and Recycle)

GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 392040 Sq. feet areas are developed as Gardens.

2. Do students spend time in the garden?

2-4 Hours during winters

3. Total number of Plants in Campus?

<i>Plant type with approx. count</i>	
<i>Full grown Trees</i>	<i>1656</i>
<i>Small Trees</i>	<i>1261</i>
<i>Hedge Plants</i>	<i>4410</i>
<i>Grass Cover SQM</i>	<i>36421.71 sqm</i>

4. Is the university campus having any Horticulture Department? (If yes, give details)

Yes, Total 05 staff deployed in horticulture

5. How many Tree Plantation Drives organized by campus per annum?

Annually, around 6 times Tree Plantation Drives are Organized by university. Total 1430 trees and hedge plants planted in this Financial Year with more than 80% survival rate.

6. Is there any Plant Distribution Program for Students and Community?

Yes, Saplings are distributed to Students and visitors at various Occasions. Besides this landscape of some area in city are developed by Institute. (photographs attached in annexure 1)

8. Is there any Plant Ownership Program?

NA

WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 38.2 KL/month

Gardening – 0 KL/month

Kitchen and Toilets – 251.8 KL/month

Others – 113.9 KL/month

Hostel – 3580.2 KL/Month

Total = 3984.1 KL/Month

2. How does your institute store water? Are there any water saving techniques followed in your institute?

Storage: Water is stored in multiple water tanks situated at the roof of building and then it is transferred to different areas of the university to fulfill the water requirement for different purposes.

Saving Techniques: Avoid overflow of water controlled valves are provided in water supply system. Close supervision for water supply system.

3. Locate the point of entry of water and point of exit of waste water in your institute.

Point of Entry - Natural Spring Water

Point of Exit –

1. From Canteen, Toilets, bathrooms by covered drainage which is connected to (1000

KLD) STP in campus area.

2. From labs and medicals, to STP (35 KLD)
And, then, transferred to the Agriculture Farms

4. Write down ways that could reduce the amount of water used in your institute

Basic ways:

- Close the taps after usage
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- Water Conservation awareness for new students
- Initiate the installations of water less urinals

ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Birds, Dogs, Cats, Cows and Squirrels are commonly found in campus. A variety of bird's species and other flora and fauna available, so institute doing their bit for its conservation.

University has veterinary doctor for animal welfare

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

Yes, SDG committee actively organizes awareness through campaigns and poster competition.

CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year CO2 emission

(electricity used per year in kWh/1000) x 0.84

168111.07 kWh/1000 x 0.84

=168111.07/1000x0.84

=141.21 tons

2. Per year CO2 emission from LPG used for cooking in Hostel and Canteen or Mess

(LPG used per year in kWh/1000) x 0.84

165325.49 kWh/1000 x 0.84

=165325.49/1000x0.84

=138.87 tons

3. Per year CO2 emission from Diesel used in DG sets as alternate energy source

(electricity used per year in kWh/1000) x 0.84

28811.36kWh/1000 x 0.84

=28811.36/1000x0.84

=24.20 tons

4. Transportation per year (Bus) CO2 emission from transportation (Bus)

(Number of the shuttle bus in our University x total shuttle bus service each day x approximate distance travelled by the vehicle inside the campus in kilometers x 216 /100) x 0.01

=5x2x1x216/100x0.01

=0.22 tons

**216 working days per year, 0.01 is the coefficient to calculate the emission in metric tons per 100*

5. Transportation per year (car) CO2 emission from transportation (car)

(Number of cars entering University campus x 2 x approximate distance travelled by the vehicle inside the campus in kilometers x 225/100) x 0.02

=10x2x2x216/100x0.02

=1.73 tons

Total CO2 emission per year cumulative by electricity usage + LPG usages + Diesel usage + bus transportation + car transportation (141.21+138.87+24.20+ 0.22+1.73) = **306.24 tons**

Carbon absorption by flora in the institution

There are 1656 full grown trees and 1261 semi grown trees of different species, on the campus spread over 45 Bighas.

Carbon absorption capacity of one full grown tree 22 kg CO₂ Therefore Carbon absorption capacity of 1656 full-grown trees $1656 \times 22 \text{ kg CO}_2 = 36432 \text{ kg of CO}_2 = 36.43 \text{ tons of CO}_2$.

The carbon absorption capacity of 1261 semi-grown trees is 40% of that of full-grown trees. Hence the carbon absorption $1261 \times 6.8 \text{ kg of CO}_2 = 8574.80 \text{ kg of CO}_2 = 8.57 \text{ tons of CO}_2$

There are approximately Hedge Plants 4410 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO₂ where as some others absorb very low level of CO₂. In the absence of a detailed scientific study, 200g of CO₂ absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is $4410 \times 200 \text{ g} = 882 \text{ kg} = 0.88 \text{ tons of CO}_2$

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 302040 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area $302040 \times 365 \times 0.1 \text{ g CO}_2 = 14309.46 \text{ kg CO}_2$ per year, Total carbon absorption per year is 14.31 tons of CO₂.

Grand total of carbon absorption capacity of the campus is 60.20 tons. University is doing their best towards carbon neutrality.

SOLAR INSTALLATION DETAILS

The Solar Water Heater system at Eternal University comprises of 2 types a) Flat Plate Collector b) Evacuated Tube Collector. The total capacity is 18000 litres per day. There are 3 water tanks connected to the system. The total capacity of Water tanks is 11000 Litres. Heated water is used for the purpose of bathing in the hostel and cooking in the kitchen.

SOLAR PV SYSTEM 200 KWP

This Solar PV Plant was installed in year 2012 under the subsidy scheme of Ministry of New and Renewable Energy. It was one of the highest Solar PV Installation worked under the scheme. The plant has 800 Solar Plates of size 250 Wp each. 4 Inverters of size 50 kWp each convert the DC electricity into the AC electricity. The produced electricity from the plant is fed into the Distribution system for the electrification inside the buildings.



SOLAR WATER HEATER

The Solar Water Heater system at Eternal University comprises of 2 types

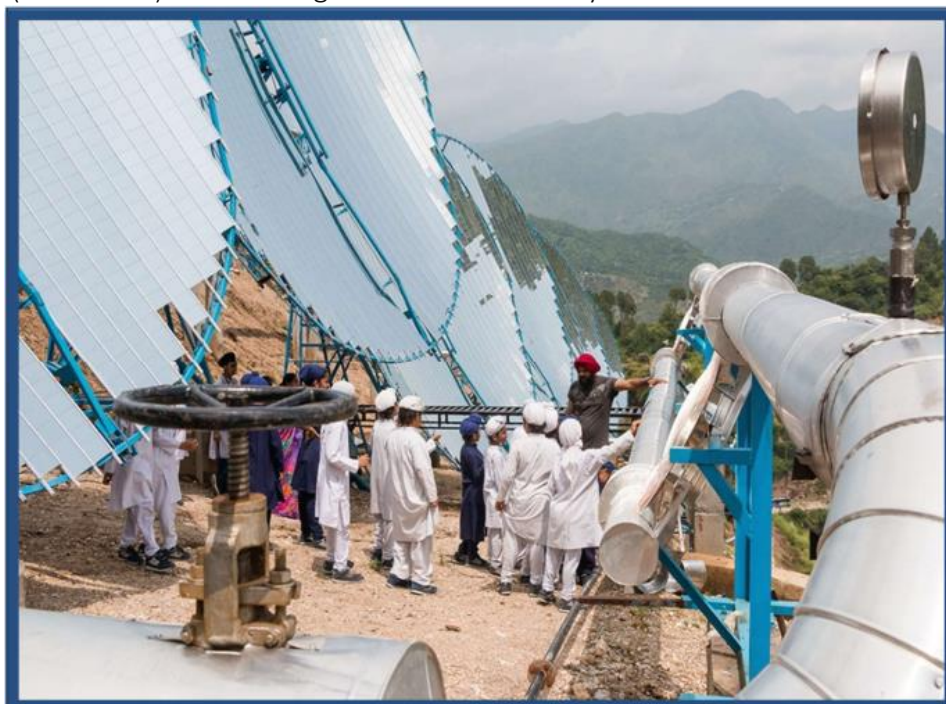
- a) Flat Plate Collector
- b) Evacuated Tube Collector

The total capacity is 18000 liters per day. There are 3 water tanks connected to the system. The total capacity of Water tanks is 11000 Liters. Heated water is used for the purpose of bathing in the hostel and cooking in the kitchen.



CONCENTRATED SOLAR THERMAL SYSTEM (CST)

CST Plants in the Campus is used for the community cooking for 5500 persons. It was one of the largest plant in the North India at the time of Installation in the year 2017. CST plant utilizes the thermic fluid for its operation for the necessary generation of the steam, which is utilized in the cooking. The Net impact of the CST Plant results in saving of 18250 LPG cylinders in a year. Each cylinder being 19 kg, therefore total $(18250 \times 19) = 346750$ kg of LPG is saved in a year.



GREEN INITIATIVES BY CAMPUS

- **Renewable Energy** - Solar power plant of capacity 200 KW is installed on building roof and hills that will supply approx. 50-60% of total power in campus.
- **Biodiversity Conservation** – Flora and fauna conservation program and awareness campaign organised as per the local geography.
- **Tree Plantation Drives** - Six Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.
- **Air Pollution Reduction** - Personal Vehicles (Students) not allowed at campus and university provides Bicycle in campus area.
- **Traditional Bulb to LED** - University has installed 1060 LED bulbs/ Tube light as replacement of traditional lighting system.
- **Solid Waste Management** -Waste segregation & management using Waste treatment plant, STP & ETP.
- **Environment Committee** – SDG committee/Environment committee is headed by Dr. Pritesh Vyas
- **Recycling The Waste** – University is converting waste plastic into bricks and pots, and they recycle used papers to make file covers.
- **Drip Irrigation Technique** – University garden committee has adopted this technique to save water.

RECOMMENDATIONS

- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- University should go for water balancing / audit for monitoring the use and wastage of water.
- Increase in display of environment conscious poster/paintings/slogans in the building for spreading awareness amongst students.
- “Save Energy” and “Save Water” Messages should be displayed at various locations to aware the students and staff about energy savings and water savings.
- Eco-friendly parameters should be included in the purchase of articles and goods for the university campus.
- Solar powered street lights and LED display board should be there in university campus
- Reduction in use of paper work by go digital system for teaching and examinations.
- Usage of curtains should be restricted in day time in order to get maximum natural light in classrooms.
- Dishwasher and washing machines should be adopted in mess and hostel to save water.

Transparency of Green Audit Report

Green audit report is one of the useful means of demonstrating an organization's commitment to openness and transparency. If an Organisation believes it has nothing to hide from its stakeholders, then it should feel confident enough to make its green audit reports freely available to those who request them. As a basic rule, green audit reports should be made available to all stakeholders.

|| CONCLUSION

This audit involved extensive consultation with all the Eternal University team, interactions with key personnel on wide range of issues related to Environmental aspects. Eternal University has SDG Committee for sustainable use of resources. Overall 80% of University campus is for landscaping. The audit has identified several observations for making the campus premise more environment 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 few things are important to initiate urgently are installation of water meters and water balancing report.

|| REFERENECE:

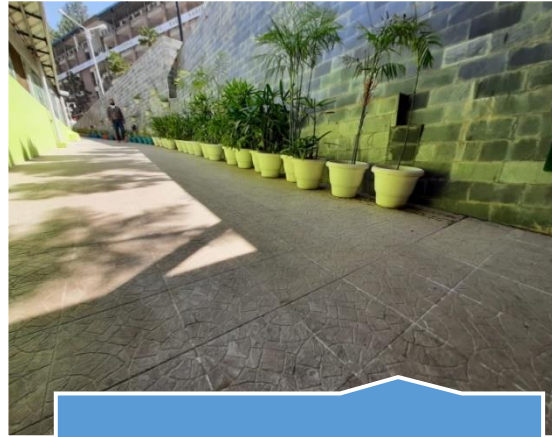
- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The 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



ANNEXURE – ENVIRONMENT CONSOUSNESS PHOTOGRAPHS



Lush Green Campus



Neat and Clean Campus



Air Purifying Plants



Air Purifying Plants



Indoor Plants



Indoor Plants



Seminar on Sustainability



Ozone Day Celebration



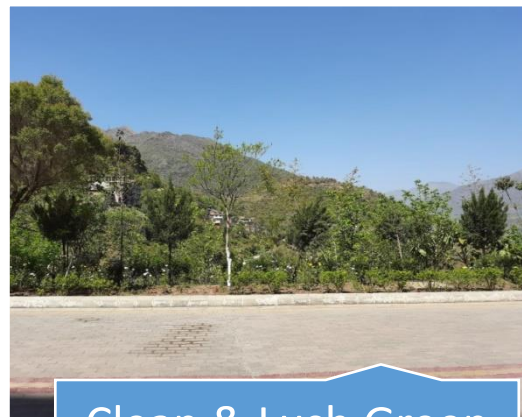
Solar Utility Training to Villegers



Pollution Awareness Campaign



Pavers used in campus



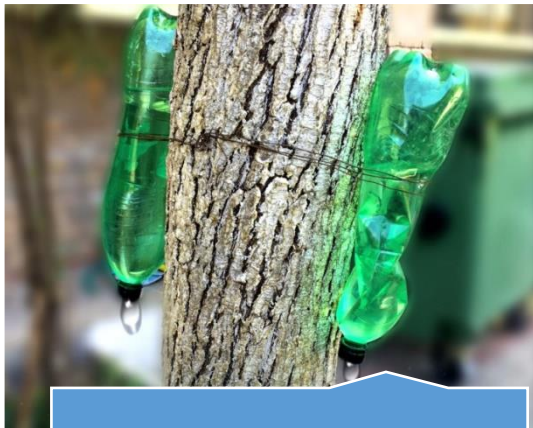
Clean & Lush Green Campus



Plantation Drive by Students



Plantation Drive by Students



Drip Irrigation to Save Water



Windows as per NBC Guidelines



Ventilated Class Rooms



Green Building Design

******* END OF THE REPORT *******