



VIVEKANANDA COLLEGE
UNIVERSITY OF DELHI

GREEN AUDIT REPORT

2021-2022

PREPARED BY
EHS ALLIANCE SERVICES



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CERTIFICATE



CERTIFICATE

PRESENTED TO

VIVEKANANDA COLLEGE

University of Delhi, Vivek Vihar, Delhi 110095

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



07.03.2023

DATE OF AUDIT

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ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Vivekananda College 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. Subhash Chandra (EVS Department)**, for his continuous support and guidance, without which the completion of the project would not have been 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. Vanita Sondhi - Convener, IQAC – Applied Psychology Department

Dr. Salma Seth - Co-convener, IQAC – Applied Psychology Department

Mr. Amit Kumar – Assistant Professor, Economics Department

Mr. Jaspertap Singh – Assistant Professor, Political Science Department

Dr. Shubhashri Bose - Convener Garden Committee and NSS

Dr. Rajni Jindal – Librarian

Mr. Sharvan Kumar - Daftri & Offg. JACT

Mr. Naresh Kumar - Daftri & Offg. JACT

Last but not the least, we would like to thank **Dr. Hina Nandrajog – (Officiating Principal)**, Vivekananda College for giving us an opportunity to evaluate the environmental performance of the campus.

DISCLAIMER

EHS Alliance Services Audit Team has prepared this report for Vivekananda College based on input data submitted by the representatives of college 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.

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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 College 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 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 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 as below:



INTRODUCTION

Now a 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 college 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 institution 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 COLLEGE

The college was setup in 1970 in Gandhi Nagar by the Delhi Administration (now the govt. of NCT of Delhi) out of grants from UGC and Delhi Administration with a specific objective of providing opportunities for higher education to women in the Trans-Yamuna area.



The foundation stone of the College building was laid on 26th Oct. 1976 by Prof. S. Nurul Hassan and the building was dedicated by Swami Ranganathananda of the Ramakrishna Mission in 1979. The college started in a school building with approximately 300 students admitted to B.A. (Pass). Since then the college has witnessed a meteoric rise in the number of students seeking admission in the different courses offered by it. It is one of the most sought after college in the Trans-Yamuna area for women education.

It has grown to its present stature under the able guidance of the founder principal, Dr. Raj Wadhwa and the first chairperson of the Governing Body, Dr. R.N. Kataria. Subsequent chairpersons and members of the Governing Body and Principals added their valuable contributions to the growth and development of the college over the years.

The college has developed beautiful gardens and ornamental lawns which contribute to the overall aesthetics of the college and enhance the learning experience.

The dedication, commitment and loyalty of the teaching and non-teaching staff, along with the enthusiasm and achievements of the students over the years, have contributed largely to bring the college to its present position.

Today, the college offers many discipline and honours courses at the undergraduate level, two post graduate courses – Hindi and Sanskrit, several add-on courses (e.g. Hindi Patrakarita, Translation & English Proficiency) and one self-financing course (German Language).



VISION & MISSION

Vivekananda College is one of the largest colleges of East Delhi that provides opportunities for higher education to women in the trans-Yamuna area. A multi – facility premier institution with qualified academicians imparting education in diverse fields, the college has a reputation for outstanding performance in academics. A constituent college of the University of Delhi, it attracts some of the most hard-working undergraduates every year, not simply because of its reputation in East Delhi, but more importantly because of its dedicated faculty. Many amongst its faculty are renowned authors and are read with considerable interest by scholars and researchers. Furthermore, concerted efforts are being made to improve upon its infrastructure and facilities. Over the years, both graduate and post graduate students from Vivekananda College have performed well in life. Quite a few students have been readily admitted in renowned universities and have good jobs.

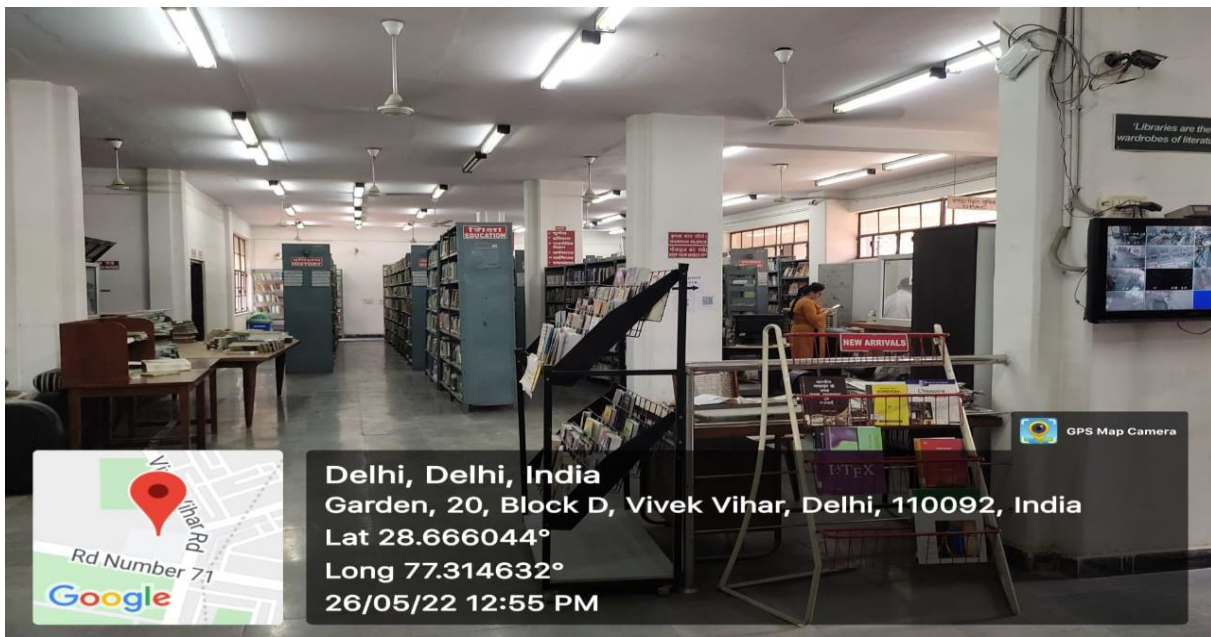
Swami Vivekananda believed, ‘Education is the manifestation of the perfection already in man.’ The college has come to be known for its emphasis on ideals and values of Swami Vivekananda, which are inculcated in its pupils. A range of enriching culture and sports activities throughout the year add a dimension of team effort and collective enterprise in the allround development of personalities of students at Vivekananda. We at Vivekananda aim to impart education by which character is developed and the mind achieves a broader perspective to enable our students to look upto wider horizons and become honest and responsible citizens of the country.

“We want that education by which character is formed, strength of mind increased, the intellect is expanded, and by which one can stand on one’s own feet. With such an education, women will solve their own problems”.

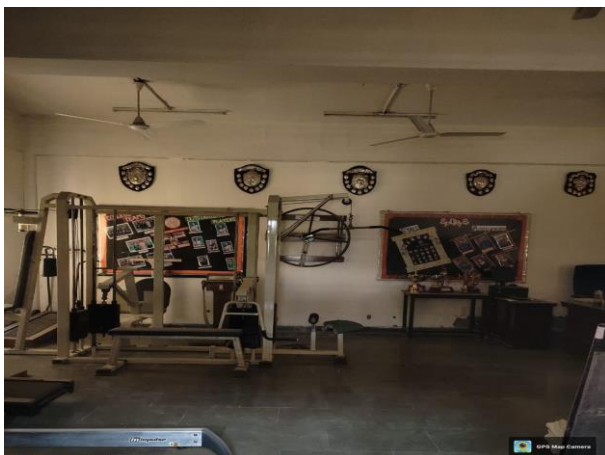
– Swami Vivekananda

Facilities in the campus

1. **Library:** College Library is well-stocked and fully computerized using LSEase software. It has approximately 65000 Books covering almost all aspects of Arts, Commerce, Humanities, and Science and even for pleasure reading and motivation.



2. **Sports:** The college includes a large playground (Outdoor). The college has a 200 meters Synthetic Athletic Track in March, 2011. Now the college has the facility of hockey Turf mini Hockey ground. Intensive training is imparted under expert guidance.



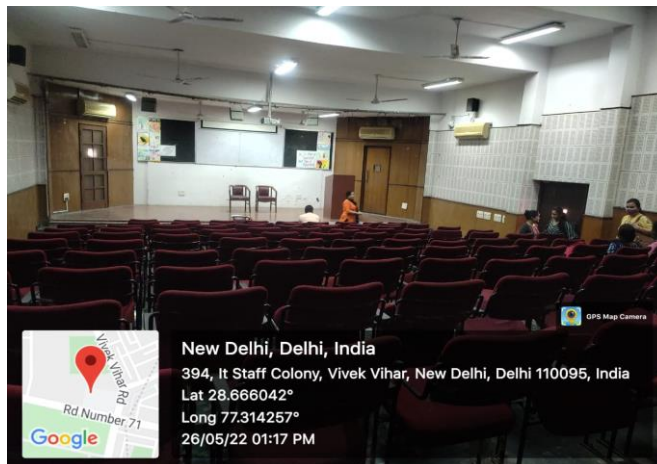
3. **Computer labs:** The College provides a well-equipped Computer and Statistics laboratory for students to carry out their innovative and scientific experiments. There are four labs within the college with 151 computers, and Internet facilities for the students and teachers.



4. **Medical room and Counselling room** - The College has a well-equipped medical room with 1 bed. First aid facilities, a wheel chair and a blood pressure machine are available in this medical room.

5. **Auditorium:** Vivekananda Auditorium has a seating capacity of 650. It is fully air-conditioned and its light and sound system are currently being revamped. The Auditorium hosts various academic and cultural events of the college and east Delhi community. It also encourages well-known cultural groups to hold their programmes for the benefit of the students and community.



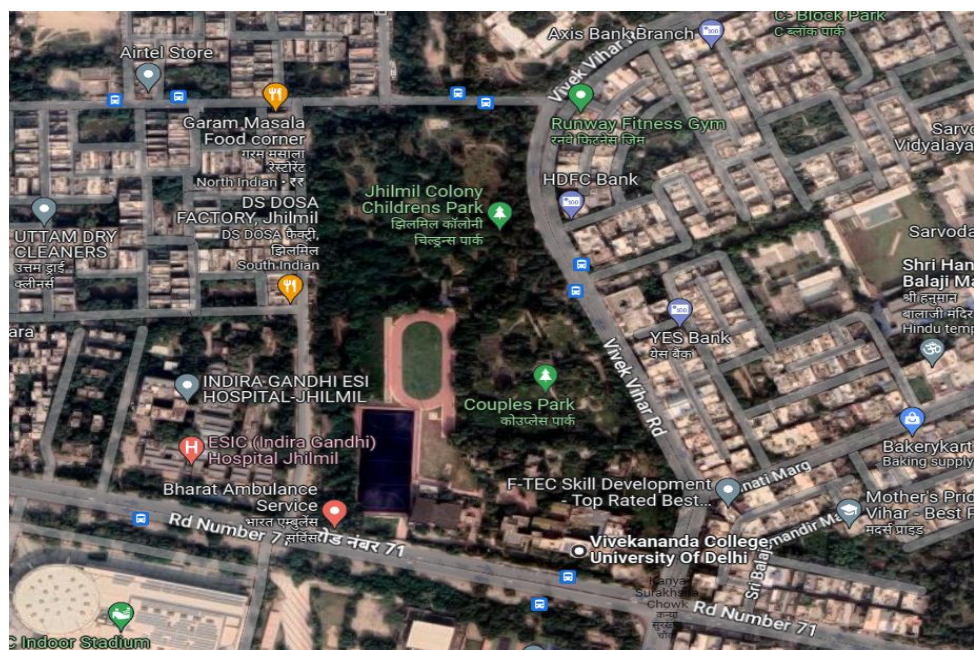


6. **Seminar Rooms:** college has 2 seminar rooms. This air-conditioned facility can accommodate up to 150 students and 150 students. Both are frequently used for seminars, talks and lectures by external professionals. It has an LCD projector and is also used for screening film shows by the Film Society of the college and for culture activities.

7. **Smart Classes:** There are 25 classrooms that are ICT enabled with projectors for enabling the use of audio-visual mediums of teaching.



Geo Location
Geo Coordinates from Google maps:
28.6675057, 77.3117454



AUDIT PARTICIPANTS

On behalf of Vivekananda College

Name	Designation
Dr. Hina Nandrajog	Officiating Principal
Dr. Vanita Sondhi	Convener, IQAC – Applied Psychology Department
Dr. Salma Seth	Co-convener, IQAC – Applied Psychology Department
Dr. Subhash Chandra	Assistant Professor - EVS
Mr. Amit Kumar	Assistant Professor - Economics Department
Mr. Jaspertap Singh	Assistant Professor - Political Science Department
Dr. Shubhashri Bose	Convener - Garden Committee and NSS
Dr. Rajni Jindal	Librarian
Mrs. Archana	Assistant
Mrs. Priyanka	Assistant
Mr. Sharvan	Daftri & Offg. JACT
Mr. Naresh Kumar	Daftri & Offg. JACT

On behalf of EHS Alliance Services

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



EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutional 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 then in to green and sustainable. Green audit provides an approach for the same. 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 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 staff in the campus.

GREEN AUDIT - ANALYSIS

1.1 GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

No, this is the first external audit organized by the College

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

Students

Male: 0 Female: 2463 Total: 2463

Teachers (including guest faculty)

Male: 24 Female: 67 Total: 91

Non-Teaching Staff

Male: 25 Female: 13 Total: 38

Total Strength



Male: 49 Female: 2543 Total: 2592

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

There are one hundred eighty working days in a year.

4. Where is the campus located?

The campus is located in Vivek Vihar, Delhi, 110095

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

<i>Garden area</i>	<i>Available</i>
<i>Playground</i>	<i>Available</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>Available</i>
<i>Canteen</i>	<i>Available</i>
<i>Hostel Facility</i>	<i>Not Available</i>
<i>Guest House</i>	<i>Available</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>Approximately 1.5 KM 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>Vivekananda College, Bus Stop (Near Gate No. 1 & 2) Jhilmil Metro Station (Approx. 1.5 Kms) Karkarduma Metro station (Approx. 2.5 Kms)</i>
<i>Market / Shopping complex</i>	<i>Available</i>

1.2 WASTE MINIMIZATION AND RECYCLING

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

Yes, Solid waste, Canteen waste, paper, plastic, horticulture, laboratories waste, e-waste, etc.

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

*Biodegradable waste - 15 Kg
Non-biodegradable waste -5 Kg
Hazardous Waste - 0 Kg
Others < 1 Kg*

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

- *Composting is done for horticulture waste management and food waste management through pit composting, bin composting and composting machine.*
- *Rain water is being stored in a large underground tank and is used for gardening purpose*
- *E-waste collection and management through recycled – authorized vendor*

4. Do you use recycled paper in institute?

No

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

Following are the ways through which college is spreading the awareness about recycling

- *Waste plastic collection drives*
- *Installation of Dustbins for waste plastic collection, e-waste collection and recycling*
- *Installation of incinerator for managing BMW*
- *Tie-ups with e-waste collection agency*
- *Webinars and seminars*

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

Not yet achieved. Possible through waste management policy and planning.
1. Minimization of waste production
2. Workshops & Trainings on Waste management

1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 15202 SQM areas are developed as Gardens.

2. Do students spend time in the garden?

Yes, students spend around 2-4 Hours during winters.

3. Total number of Plants in Campus?

Plant type with approx. count

Full grown Trees	312
Small Trees	104
Hedge Plants	2852
Grass Cover sqm	26205.14 Sqm

Below are details of plantation

S. No.	Plants	Total number of plants	Plant with name-plate	Location
1	Amaltas	12	1	Parking, Sharda, Gate 3
2	Ashoka	30	0	Herbal Garden, Open Stage, Gate 2, Vivekananda Auditorium
3	Banana	3	0	Herbal Garden, Gate 2
4	Banyan Tree (ficus benghalensis)	2	1	Sports Ground
5	Blackberry (rubus)	14	5	Gate 1, 2, Staff Quarters, Vivekananda Auditorium, Sharda Hall
6	Bottle Brush Tree	3	2	Parking, Sharda Hall
7	Bottle Palm	22	0	Gate 4, 2, Vermicomposting site, Vivekananda Auditorium
8	Cassia siamia	1	1	Parking
9	Champa/ Plumeria	29	3	Gate 1, Vivekananda Auditorium, Sharda Hall, Garden-Gate 2
10	China Palm (Livistona chinensis)	35	5	Vivekananda Auditorium, Parking, Gate 2, Sharda Hall
11	Curry tree	2	1	Garden-Gate 2
12	Cycas revoluta (sago palm)	3	1	Gate 2
13	Date palm	3	1	Gate 1, Parking
14	Drumstick tree	3	1	Near Synthetic Track
15	Fish tail palm	11	1	Sharda Hall
16	Guava	8	1	Gate 1
17	Gular (ficus resmosa)	2	1	Near Synthetic Track, Sharda Hall

18	Gulmohar (delonix regia)	6	1	Gate 2, Staff Quarters
19	Hibiscus	26	1	Gate 1, 2, Garden-Gate 2
20	Jack fruit	3	2	Gate 2, Staff Quarters
21	Kabuli khar (prosopis juliflora)	2	0	Sports Ground
22	Kalp vriksh	1	1	Principal Bungalow
23	Lemon tree	4	0	Gate 2, Staff Quarters
24	Maror Fali (Helicteres isora)	2	1	Near Vivekananda Auditorium, Canteen
25	Maulsari	4	2	Gate 2
26	Naval orange	1	1	Open Stage
27	Neem	15	2	Gate 1, Behind Vivekananda Auditorium, Sports Ground, Sharda Hall, Staff Quarters
28	Peepal (ficus religiosa)	6	0	Near Synthetic Track, Gate 2, 3
29	Pilkhan (white fig)	1	1	Gate no 2
30	Pome granate	1	1	Gate 1
31	Purple diamond (loropetalun Chinese)	12	0	Gate 1, Parking
32	Wood apple	8	1	Canteen, Vivekananda Auditorium
33	Mango	12	0	Staff Quarters, Gate 2, Garden-Gate 2
34	Mahua	3	2	Vivekananda Auditorium
35	Foxtail palm	11	3	Vivekananda Auditorium, Gate 1
36	Seeba	1	0	Gate 1
37	Muchkan Champa	1	0	Staff Quarters
38	Alstonia	2	2	Gate 2
39	Tikoma	1	1	Staff Quarters
40	Papdi	2	0	Gate 1, Synthetic Track
41	Arzun	5	1	Gate 1, 3, Vivekananda Auditorium, Green house
42	Balam Kheera	3	1	Staff Quarters, Sports Ground
43	Sheesam	1	0	Gate 2
44	Kadam	4	1	Open Stage, Garden-Gate 2
45	Parijaat	1	1	Staff Quarters
46	Semal	2	2	Staff Quarters, Sports Ground

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

Yes, Total 5 staff (maali) deployed in horticulture department



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

*Two Plantation Drives are Organized by campus in the last FY.
Survival rate is more than 85%.*

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

No

8. Is there any Plant Ownership Program?

No

1.4 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 74.84 KL/month

Gardening – 660.37 Kl/month

Kitchen and Toilets – 492.22 KL/month

Others – 176.73 KL/month

Hostel – 0 KL/Month

Total = 1404.16 KL/Month

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

Available total water storage is 90,000.

2 tanks of 5000 litres = 10,000 litres

10 tanks of 1000 litres = 10,000 litres

1 Underground tank of 50,000 litres = 50,000 litres

1 Overhead tank of 20,000 litres = 20,000 litres

**20% of water is being used for athlete track and hockey sports ground.*

Saving Techniques

- *Avoid overflow of water-controlled valves are provided in water supply system.*

- Close supervision for water supply system.
- Sensor based taps are installed
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

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

Entry - Water comes from Delhi Jal board and borewell

Exit- From Canteen, Toilets, bathrooms and Labs through covered drainage which is connected to sewage

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

Basic ways:

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- Sensor based taps and push tap are installed to save water
- Water recycling and use of sprinklers for gardening

1.5 ANIMAL WELFARE

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

Hundreds of Birds, 5-6 dogs, 5-7 Cats, around 30+ Squirrels and 20+ butterfly species are found in campus. A variety of bird's species and other flora and fauna are available, so institute is doing their bit for bio diversity conservation.

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

Yes, Vivekananda College's **Eco club** actively organizes awareness through various campaigns and activities including seminars, poster competition, etc.

1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO2 emission from Electricity

$(\text{electricity used per year in kWh}/1000) \times 0.84$
 $18165 \text{ kWh}/1000 \times 0.84$

$$= 18165/1000 \times 0.84$$
$$= 48.68 \text{ tons}$$

2. LPG/PNG used per year - CO₂ emission from LPG/PNG

$$(LPG/PNG \text{ used per year in KG}) \times 2.99$$
$$215 \times 2.99$$
$$= 215 \times 2.99$$
$$= 0.64 \text{ tons}$$

3. Diesel used per year CO₂ emission from HDS (Diesel)

$$(Diesel \text{ used per year in litres}) \times 2.68$$
$$= 435 \times 2.68$$
$$= 435 \times 2.68$$
$$= 1.17 \text{ ton}$$

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

There are no college owned vehicles, so no CO₂ emission.

Total CO₂ emission per year cumulative by electricity usage + bus and car is 155.44 tons

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 312 full grown trees and 104 semi grown trees of different species, on the campus spread over 10 acres.

Carbon absorption capacity of one full grown tree 22 kg Co₂ Therefore Carbon absorption capacity of 312 full-grown trees $312 \times 22 \text{ kg Co}_2 = 6.86 \text{ tons of Co}_2$.

The carbon absorption capacity of 104 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption $104 \times 6.8 \text{ kg of Co}_2 = 0.71 \text{ tons of Co}_2$

There are approximately Hedge Plants 2852 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 $2852 \times 200 \text{ g} = 0.57 \text{ ton of Co}_2$

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 282069.78 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area $282069.78 \times 365 \times 0.1 \text{ g Co}_2 = 10.30 \text{ tons Co}_2$ per year.

Grand total of carbon absorption capacity of the campus is 18.44 tons.

GREEN INITIATIVES BY CAMPUS

➤ Solid Waste Management

- The institution has two functional compost pits for organic solid waste management.
- There is ban on single use plastic and plastic crockery in the campus.

➤ E-waste Management

- College has a separate storeroom for the safe storage of electronic waste. After a certain interval of time college disposes of the E-waste to concerned agencies through the auction process.

➤ Rain water harvesting

- The central area of the new building of college has a rainwater harvesting system for better groundwater recharge. The stored water in this tank can be used for gardening purposes and supply to the running track.

➤ Renewable Energy

- The college has also installed approximately 162 solar panels (50 KW) on the rooftop of new and old buildings.
- The College is using solar lights for street lights.

➤ Greening the campus

- The college campus has approximately 46 different species of trees. The number of different species is different and they vary from 1 to 35. China palm has been observed with a maximum number of trees (35) followed by Ashoka tree (30). Total 312 trees were counted in the campus of the institution.
- Two plantation drives were carried out in the current year in the Campus.
- Plants survival rate is around 85%
- A greenhouse has been established in the college premises to maintain greenery in the campus.

➤ Air Pollution Reduction

- Personal Vehicles (Students) are not allowed in the campus
- College is monitoring air quality through monitoring of PM_{2.5} Concentration

➤ Environment Committee Initiatives – Vivekananda College has eco club. Below are the highlights of their work on environment cautiousness.

- The Vivekananda College, University of Delhi organises cleanliness drive under swatchhta pakhwara from 1st Aug – 15th Aug 2021. Under this drive, NSS volunteers clean the nearby areas and houses and took the step forward to make their locality clean and beautiful.

- The college organized a Best out of Waste activity under swatchhta pakhwara . The students from various colleges had participated in the event and helped to make it a great success.
- College organised “Paper Bag Campaign” from 1st July 2021 to 15th July 2021. In this campaign, volunteers prepared paper bags and gave them to medical stores or departmental stores near to the house. The aim of this campaign was to reduce the use of plastic bags.
- College organised Poster Making Competition on the occasion of World Ozone Day 16th Sep. Theme for the competition was Ozone For Life.
- College celebrated Van Mahotsav from 27th to 31st July 2021. Under the Van Mahotsav, the unit has organised three events – Vraksharopan, 5 days awareness drive and a pledge.

RECOMMENDATIONS

- Environmental parameters shall be included in purchase policy to achieve a cradle to grave approach for sustainability.
- Increase the capacity of solar PV so that it can fulfil at least 70% of the electricity requirement
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- Borewell permission should be taken from authorised government department
- College should start drip irrigation to save water in campus
- College should increase the use of Sprinklers gardening purpose
- Flow rate of taps should be checked, it should not be more than 2.5 litres/minute.
- Increase plantation drives in nearby villages, local bodies, NGO and Municipal Corporation in order to balance the carbon emission and absorption.
- Arrange training programmes on environmental management system and nature conservation for schools and local people.

- College should initiate a practice where all guests should be given a planter as a gift rather than a bouquet of flowers. Also, plantation should be carried out in nearby villages.
- Involve lower hierarchy staff in environmental awareness programmes and campaigns.
- Messages should be displayed at various locations to Aware the People about Energy Savings
- Green building guidelines for future expansion projects of the campus.



CONCLUSION

This audit involves considerable team discussions and meetings with key staff members on a variety of environmental-related topics. The eco club of Vivekananda College promotes conservation of resources.

Overall 65% of Vivekananda College is for landscaping. The college makes a significant effort to act in an environmentally responsible manner and takes into account the environmental effects of the majority of its activities. The recommendations in this report suggests some more ways in which the college can work to improve its practices and develop into a more sustainable institution.

It's important to begin a few things, such as increasing Solar PV capacity, initiating drip irrigation and checking the water flow from the taps. Additionally, we strongly advise installing water metres at each building/block and water balancing report.

REFERENCE

- 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 – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS



Well ventilated building structure



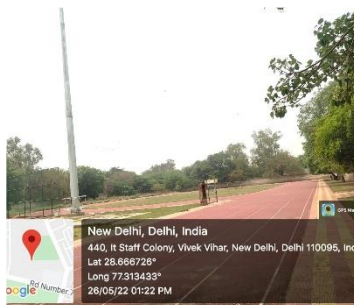
Well maintained college campus



Lush green campus



Sports Ground



Athlete track



Paving stone installed in campus



Color coded dustbins



Ornamental plants in campus



Indoor plants in campus



Classrooms as per NBC guidelines with more than 40% window ratio



Spacious and well equipped computer lab



Seminar room



Spacious Auditorium



Smart Class rooms



Poster - Save Earth



Plantation drive by the students



Green landscape



Green House



Cleanliness drive

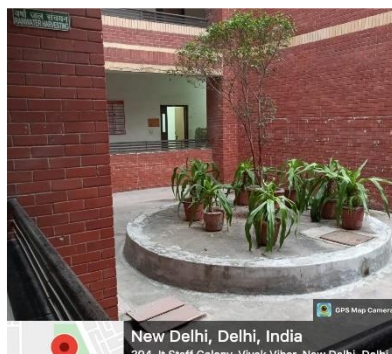


Before After

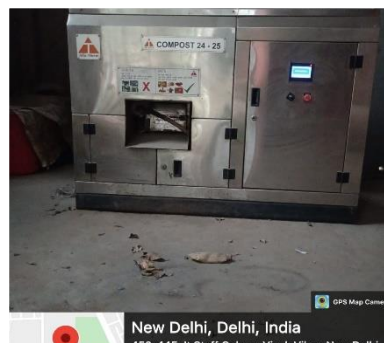
Best out of waste activity



Paper bag campaign



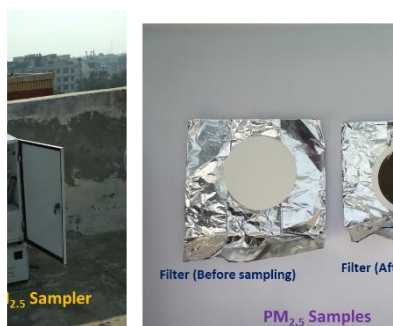
Rain water storage tank



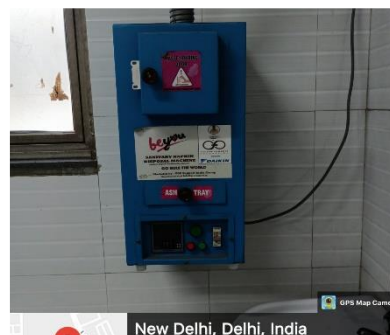
Composting machine



Compost pits



Air quality monitoring



Incinerator for sanitary waste management



Solar panel



Reuse of waste materials



Artificial bird nest



Best out of waste



Dry waste segregation



Composter



Push Taps in water coolers



Plant in herbal garden



Paved walkways



Air purifying plants

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