DPG DEGREE COLLEGE

APPROVED BY UGC, AFFILIATED TO MDU (ROHTAK)

DPG DEGREE COLLEGE

GREEN AUDIT REPORT

2020-2021

PREPARED BY
EHS ALLIANCE SERVICES

Principal
D.P.G. Degree College
Sector-34, Gurugram

TABLE OF CONTENT

CERTIFICATE

EHS alliance

CERTIFICATE

PRESENTED TO

DPG DEGREE COLLEGE GURGAON

70A, Delhi-Jaipur Expy, Block A, Sector 34, Gurugram, Haryana 122001

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

ACADEMIC YEAR 2020-21

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.

EHS ALLIANCE SERVICES GURGAON

SIGNATURE

06.01.2022
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of DPG Degree 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. Anita Chauhan, Audit Co-ordinator***, for her 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. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*

Last but not the least, we would like to thank ***Mr. Deepak Gahlot, Vice-President and Dr. S. S. Boken, Principal DPG 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 DPG Degree 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.

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 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

DPG Degree College, a premier higher educational institution, imparts holistic professional and vocational education. The college provides a dynamic learning environment to its students to pursue excellence, gain knowledge and acquire skill to achieve their goals. The campus is located to Gurugram.

The educational programmers of the society are dedicated for the promotion of holistic education and academic excellence in the technical arena. Along with carving a niche for itself, the Society has promoted the general advancement of knowledge by igniting the cerebral dimensions of students and by nurturing their innate talents. The vision of the society is to establish institutions of academic excellence to provide quality education which is known for the total commitment to professional education and research.

Modern world class campus spread over beautifully landscaped area, with intellectually vibrant ambience in a erene and lush green environment are among one of the most impressive ones in the State of Haryana. The wi-fi enabled campus has the state-of-art infrastructure comprising environment friendly Administrative block, academic blocks, spacious class rooms with internet and intranet connectivity and hi-tech multimedia and audio-visual equipment's, well equipped modern laboratories and lab, Learning Resource Centre, auditoriums, seminar halls etc. Besides building the learning resources, the college has also created several other facilities such as separate hostels for boys and girls, faculty and staff residence, sports facilities, medical room, open-air theatres, food courts, bookshops and other utilities and services. The College campus has playgrounds and courts for various games such as cricket, football, basketball, volleyball, badminton, well equipped gymnasium and facilities for indoor games for recreational activities of the college inmates. Athletic tracks, swimming pool and other sports facilities are also fast coming up at the campus. The world class physical and academic infrastructure developed by the College, essential for imparting quality education, facilitate teaching learning process and delight the students, faculty, corporate visitors and parents. Special emphasis have been placed on developing an environment highly conducive to build a solid foundation of knowledge, personality development, confidence building, pursuit of excellence, self-discipline and enhancement of creativity through motivation.

MISSION & VISION

VISION

To be an Institution of academic excellence with total commitment to quality education, research and improvement in human values with a holistic concern for better life, environment and society

MISSION

To provide inclusive and value-based quality education by making it accessible to all sections of the society.

To impart outcome-based holistic education through multi-disciplinary learning.

To nurture an environment that promotes healthy and strong minds by synergizing the benefits of curricular, co-curricular and extra-curricular activities.

To inculcate human values and enable students to be responsible citizens at national and global levels.

Facilities in the campus

Classrooms: The Classrooms provide the most conducive atmosphere for dynamic and focused discussion and are a significant factor in creating harmony in the teacher student relationship. The spacious classrooms have been designed to propel an enquiry based learning that fosters liberation of mind and eagerness to learn.

Computer Labs: computer labs are full air conditioned with computers of latest configurations. Furniture are meeting International standard. Labs are provided with campus wide network-Lawn Facility.

Library: The library of the College is fully computerized, is a veritable storehouse of information with ample number of text and reference books, national and international periodicals & journals, thesis & dissertations. The library has a special collection of prescribed text books called 'Book Bank'.

Sports ground: With lush green campus, sports ground becomes the very beautiful place to rejuvenate inner self. Advanced sports equipment's are provided to students so that they exuberantly participate in various events.

Cafeteria: The Cafeteria not only provides a vibrant atmosphere and unleaded fuel for the day but also puts forth a new method of knowledge sharing called the "Cafeteria approach.

Hostel: The College campus at present has 2 separate hostels for boys and girls. Boys hostels with a capacity of 150 students and girls hostel with 100 students The hostel rooms are spacious, well

furnished and are provided with LAN connectivity with 24 hours internet facility, AC, reading rooms with dailies and magazines and additional indoor sports facilities.

Transport: College's network of transport buses cover all nearby neighborhood, including local communities and townships lying within the radius of 50km. It is designed for the convenience of our students and staff members who are residing outside the campus. This ensures their personal safety, travel reliability and punctuality on the campus.

Hostel

Transport

Spacious classrooms

Computer Lab

AUDIT PARTICIPANTS

On behalf of DPG Degree College

Name	Designation
Dr. S. S. Boken	*Principal*
Dr. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*
Dr. Anita Chauhan	*Audit Co-ordinator*

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: 1263 Female: 809 Total: 2072

Teachers (including guest faculty)
Male: 11 Female: 70 Total: 81

Non-Teaching Staff
Male: 10 Female: 10 Total: 20

Total Strength
Male: 1291 Female: 889 Total: 2180

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

There are two hundred and seven working days in a year.

4. Where is the campus located?

The campus is located Near Hero Honda Chowk, Sector-34, Gurgaon, Haryana - 122001

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

Garden area	*Available*
Playground	*Available*
Kitchen	*Available*
Toilets	*Available*
Garbage Or Waste Store Yard	*Available*
Laboratory	*Available*
Canteen	*Available*
Hostel Facility	*Available*
Guest House	*Available*

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

Municipal dump yard	*Not in vicinity of institute*
Garbage heap	*No Garbage heaps*

Public convenience	*Public convenience is available*
Sewer line	*Approximately 1.5 KM sewer line within campus*
Stagnant water	*No stagnant water*
Open drainage	*No*
Industry – (Mention the type)	*No*
Bus / Railway Station	*Bus Stop - Marble Market Sector 34* *Train station – Gurgaon* *Metro Station - Huda City Center*
Market / Shopping complex	*Available*

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 - 2 Kg
Others < 1 Kg

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

College works on the principle of 3R to manage generated waste

4. Do you use recycled paper in institute?

Yes, the paper is recycled in collaboration with Greenobin.

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

College is spreading the awareness about recycling through different activities and campaigns to students, staff and local nearby villages

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

Not yet achieved.

1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 236806.03 sq. ft 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	*105*
Small Trees	*558*
Hedge Plants	*1700*
Grass Cover sqm	*261360 sq. ft*

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

Yes, 3 staff (maali) deployed in horticulture department

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

Plantation Drive is carried out annually.
Survival rate is more than 75%.

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** – 35.07 KL/month*

***Gardening** – 611.88 Kl/month*

***Kitchen and Toilets** – 404.39 KL/month*

***Others** – 110.87 KL/month*

***Hostel** – 144.45 KL/Month*

Total = 1306.66 KL/Month

This water consumption is low in comparison to the normal working campus, as campus was operational in hybrid model i.e both online and offline classes were being conducted during pandemic.

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

College stores water in underground and overhead tanks.

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.

***Entry** - Water comes from Municipal corporation and borewell*
***Exit**- From Canteen, Toilets, Hostel, 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*

1.5 ANIMAL WELFARE

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

30+ Birds, 2-3 dogs, 1-2 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, DPG Degree 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

(electricity used per year in kWh/1000) x 0.84
287006 kWh/1000 x 0.84

= 287006/1000x0.84
= 241.09 tons

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

(LPG/PNG used per year in KG) x 2.99
5870 x 2.99
=5870 x 2.99
=17.55 tons

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

(Diesel used per year in litres) x 2.68
=4030 x 2.68
= 4030 x 2.68
=10.80 tons

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

There are two college owned vehicles, 8 bus and 2 car
*=(8*2*2*180/100)*0.01 + 2*4*2*180/100*0.02*
=0.86 tons

Total CO2 emission per year cumulative by electricity usage + Diesel + LPG + bus and car is 270.30 tons

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 105 full grown trees and 558 semi grown trees of different species, on the campus spread over 261360 sq ft.

Carbon absorption capacity of one full grown tree 22 kg Co2 Therefore Carbon absorption capacity of 105 full-grown trees 105 x 22 kg Co2 = 2.31 tons of Co2.

The carbon absorption capacity of 50 semi-grown trees is 30% of that of full-grown trees. Hence the carbon absorption 558 x 6.8 kg of Co2 = 3.79 tons of Co2

There are approximately Hedge Plants 1700 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 1700 x 200 g = 0.34 ton of Co2

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 261360 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 261360 x 365 x 0.1 g Co2 = 9.54 tons Co2 per year.

Grand total of carbon absorption capacity of the campus is 15.98 tons.

GREEN INITIATIVES

- The institution provides biodegradable waste to Municipal Corporation.
- There is ban on single use plastic and plastic crockery in the campus.
- 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.
- The college has installed approximately solar panels (256 KW)
- Personal Vehicles (Students) are not allowed in the campus

RECOMMENDATIONS

- Green building guidelines for future expansion projects of the campus.
- Environmental parameters shall be included in purchase policy to achieve a cradle to grave approach for sustainability.
- College should start the use of Sprinklers gardening purpose
- 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.
- Increase in Environmental promotional activities for spreading awareness at the campus.
- To eliminate the spillage and over usage of water in washbasins, urinals and toilet push taps are highly recommended.
- Enhance recycling. This can be done by creating a group where students can recycle books, personal clothes and other materials for needy students. This can be an initiative under the green program.
- Regular workshops related to Plastic free campus, plantation drives, 3R implementation, e-waste collection, menstrual hygiene, etc. should be carried out
- Messages should be displayed at various locations to Aware the People about Energy Savings

CONCLUSION

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

Overall 50% of DPG Degree 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 initiating sprinklers for irrigation and conservation awareness message display at different locations in campus. Additionally, we strongly advise to increase awareness amongst the students, staff and local societies for 3R principle and conservation of water and energy.

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 –ENVIRONMENT CONSCIOUSNESS PHOTOS

Well ventilated building structure

Well maintained college campus

Lush green campus

Sports Ground

Recycling activity

Poster making activity

Awareness drive in nearby govt. school

Cleanliness drive

Hostel Mess

Hostel Room

Cafeteria

Solar PV

Awareness poster competition

Plantation drive

Active participation in plantation campaign

Push Taps for water conservation

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

DPG DEGREE COLLEGE

APPROVED BY UGC, AFFILIATED TO MDU (ROHTAK)

GREEN AUDIT REPORT

2021-2022

PREPARED BY
EHS ALLIANCE SERVICES

Principal
D.P.G. Degree College
Sector-34, Gurugram

TABLE OF CONTENT

CERTIFICATE

EHS alliance

CERTIFICATE

PRESENTED TO

DPG DEGREE COLLEGE GURGAON

70A, Delhi-Jaipur Expy, Block A, Sector 34, Gurugram, Haryana 122001

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

ACADEMIC YEAR 2021-22

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.

EHS ALLIANCE SERVICES GURGAON

SIGNATURE

23.03.2023
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of DPG Degree 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. Anita Chauhan, Audit Co-ordinator***, for her 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. Devkanya Gupta	Co-ordinator, IQAC
Dr. Priyanka Kumari	Member, IQAC
Dr. Priya Shukla	Member, IQAC
Dr. Lalit Kumar	Co-ordinator, NSS

Last but not the least, we would like to thank ***Mr. Deepak Gahlot, Vice-President and Dr. S. S. Boken, Principal DPG 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 DPG Degree 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.

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 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

DPG Degree College, a premier higher educational institution, imparts holistic professional and vocational education. The college provides a dynamic learning environment to its students to pursue excellence, gain knowledge and acquire skill to achieve their goals. The campus is located to Gurugram.

The educational programmers of the society are dedicated for the promotion of holistic education and academic excellence in the technical arena. Along with carving a niche for itself, the Society has promoted the general advancement of knowledge by igniting the cerebral dimensions of students and by nurturing their innate talents. The vision of the society is to establish institutions of academic excellence to provide quality education which is known for the total commitment to professional education and research.

Modern world class campus spread over beautifully landscaped area, with intellectually vibrant ambience in a erene and lush green environment are among one of the most impressive ones in the State of Haryana. The wi-fi enabled campus has the state-of-art infrastructure comprising environment friendly Administrative block, academic blocks, spacious class rooms with internet and intranet connectivity and hi-tech multimedia and audio-visual equipment's, well equipped modern laboratories and lab, Learning Resource Centre, auditoriums, seminar halls etc. Besides building the learning resources, the college has also created several other facilities such as separate hostels for boys and

girls, faculty and staff residence, sports facilities, medical room, open-air theatres, food courts, bookshops and other utilities and services. The College campus has playgrounds and courts for various games such as cricket, football, basketball, volleyball, badminton, well equipped gymnasium and facilities for indoor games for recreational activities of the college inmates. Athletic tracks, swimming pool and other sports facilities are also fast coming up at the campus. The world class physical and academic infrastructure developed by the College, essential for imparting quality education, facilitate teaching learning process and delight the students, faculty, corporate visitors and parents. Special emphasis have been placed on developing an environment highly conducive to build a solid foundation of knowledge, personality development, confidence building, pursuit of excellence, self-discipline and enhancement of creativity through motivation.

MISSION & VISION

VISION

To be an Institution of academic excellence with total commitment to quality education, research and improvement in human values with a holistic concern for better life, environment and society

MISSION

To provide inclusive and value-based quality education by making it accessible to all sections of the society.

To impart outcome-based holistic education through multi-disciplinary learning.

To nurture an environment that promotes healthy and strong minds by synergizing the benefits of curricular, co-curricular and extra-curricular activities.

To inculcate human values and enable students to be responsible citizens at national and global levels.

Facilities in the campus

Classrooms: The Classrooms provide the most conducive atmosphere for dynamic and focused discussion and are a significant factor in creating harmony in the teacher student relationship. The spacious classrooms have been designed to propel an enquiry based learning that fosters liberation of mind and eagerness to learn.

Computer Labs: computer labs are full air conditioned with computers of latest configurations. Furniture are meeting International standard. Labs are provided with campus wide network-Lawn Facility.

Spacious classrooms

Computer Lab

Library: The library of the College is fully computerized, is a veritable storehouse of information with ample number of text and reference books, national and international periodicals & journals, thesis & dissertations. The library has a special collection of prescribed text books called 'Book Bank'.

Sports ground: With lush green campus, sports ground becomes the very beautiful place to rejuvenate inner self. Advanced sports equipment's are provided to students so that they exuberantly participate in various events.

Cafeteria: The Cafeteria not only provides a vibrant atmosphere and unleaded fuel for the day but also puts forth a new method of knowledge sharing called the "Cafeteria approach.

Hostel

Transport

Hostel: The College campus at present has 2 separate hostels for boys and girls. Boys hostels with a capacity of 150 students and girls hostel with 100 students The hostel rooms are spacious, well furnished and are provided with LAN connectivity with 24 hours internet facility, AC, reading rooms with dailies and magazines and additional indoor sports facilities.

Transport: College's network of transport buses cover all nearby neighborhood, including local communities and townships lying within the radius of 50km. It is designed for the convenience of our students and staff members who are residing outside the campus. This ensures their personal safety, travel reliability and punctuality on the campus.

Geo Location
Geo Coordinates from Google maps
28.4244639, 77.0206835

AUDIT PARTICIPANTS

On behalf of DPG Degree College

Name	Designation
Dr. S. S. Boken	*Principal*
Dr. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*
Dr. Anita Chauhan	*Audit Co-ordinator*

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 second 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?

Yes, this is second external audit organized by the College

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

Students
Male: 1361 Female: 890 Total: 2251

Teachers (including guest faculty)
Male: 11 Female: 70 Total: 81

Non-Teaching Staff
Male: 17 Female: 10 Total: 21

Total Strength
Male: 1391 Female: 970 Total: 2360

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

There are two hundred working days in a year.

4. Where is the campus located?

The campus is located Near Hero Honda Chowk, Sector-34, Gurgaon, Haryana - 122001

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

Garden area	*Available*
Playground	*Available*
Kitchen	*Available*
Toilets	*Available*
Garbage Or Waste Store Yard	*Available*
Laboratory	*Available*
Canteen	*Available*
Hostel Facility	*Available*
Guest House	*Available*

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

Municipal dump yard	*Not in vicinity of institute*
Garbage heap	*No Garbage heaps*
Public convenience	*Public convenience is available*
Sewer line	*Approximately 1.5 KM sewer line within campus*
Stagnant water	*No stagnant water*
Open drainage	*No*
Industry – (Mention the type)	*No*
Bus / Railway Station	*Bus Stop - Marble Market Sector 34* *Train station – Gurgaon* *Metro Station - Huda City Center*
Market / Shopping complex	*Available*

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 - 20 Kg
Non-biodegradable waste -5 Kg
Hazardous Waste - 1 Kg
Others < 1 Kg

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

College works on the principle of 3R to manage generated waste

4. Do you use recycled paper in institute?

Yes, the paper is recycled in collaboration with Greenobin.

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*
- *Tie-ups with paper recycle 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 236806.03 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	*105*
Small Trees	*558*
Hedge Plants	*5000*
Grass Cover sqm	*261360 Sq ft*

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

Yes, Total 3 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 75%.

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

Yes, College has a practice where all guests are given a planter as a gift rather than a bouquet of flowers.

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 – 75.71 KL/month

Gardening – 554.40 Kl/month

Kitchen and Toilets – 437.78 KL/month

Others – 171.66 KL/month

Hostel – 288.90 KL/Month

Total = 1528.46 KL/Month

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

Available total water storage of the college

6 tanks of 500 litres = 3,000 litres
1 Underground tank of 10,000 litres = 10,000 litres

Saving Techniques

- *Avoid overflow of water-controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Push taps are installed for water conservation*
- *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 Municipal corporation supply and borewells*
Exit*- From Canteen, Toilets, Hostel, 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*
- *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.)

30+ Birds, 2-3 dogs, 1-2 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, DPG Degree 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

(electricity used per year in kWh/1000) x 0.84
328896.00 kWh/1000 x 0.84

= 328896/1000x0.84
= 276.27 tons

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

(LPG/PNG used per year in KG) x 2.99
7045 x 2.99
=7045 x 2.99
=21.06 tons

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

(Diesel used per year in litres) x 2.68
=4425 x 2.68
= 4425 x 2.68
=11.86 ton

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

There are 10 college owned vehicles that includes 8 buses and 2 cars
*=(8*2*2*180/100)*0.01 + 2*4*2*180/100*0.02*
=0.58 + 0.29
=0.86 tons

Total CO2 emission per year cumulative by electricity usage + LPG + Diesel + bus and car is 310.06 tons

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 105 full grown trees and 558 semi grown trees of different species, on the campus spread over 261360 sq ft.

Carbon absorption capacity of one full grown tree 22 kg Co2 Therefore Carbon absorption capacity of 105 full-grown trees 105 x 22 kg Co2 = 2.31 tons of Co2.

The carbon absorption capacity of 558 semi-grown trees is 30% of that of full-grown trees. Hence the carbon absorption 558 x 6.8 kg of Co2 = 3.79 tons of Co2

There are approximately Hedge Plants 5000 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 5000 x 200 g = 1.0 ton of Co2

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 261360 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 261360 x 365 x 0.1 g Co2 = 9.54 tons Co2 per year.

Total of carbon absorption capacity of the campus is 16.64 tons.

GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - Systematically engage with the 3Rs of environment friendliness (Reduce, Reuse and Recycle).
  - Collect paper waste produced on campus and collaborate with scrap dealers for recycling.
  - Reduce use of paper by supporting digitization of attendance and internal assessment records.
  - Reduce requirement of printed books by updating the e-books and e-journals collection of the college library.
  - The habit of reusing and recycling non-biodegradable products
  - Organizing workshops for students on solid waste management.
  - There is ban on single use plastic and plastic crockery in the campus.

- **Liquid Waste Management**
  - Maintain leak proof water fixtures.
  - Minimize the use of water by constructing more Indian style toilets instead of western style toilets.
  - Continued employment of a caretaker to take immediate steps to stop anywater leakage through taps, pipes, tanks, toilet flush etc.
  - Reuse of wastewater generated by the Reverse Osmosis (RO) system in washrooms.

- **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.

- **Renewable Energy**
  - The college has also installed solar PV (256 KW) on the rooftop of building.
  - The college believes in using cleaner energy such as LED lighting.

- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus

- **Eco Club activities**
  - Yoga day celebrated by DPG Degree College in collaboration of Fortis Hospital and MCG for nearby community to Create Awareness about fitness and Health. (21 May, 2022)
  - A Traffic Awareness Programme was organized by NSS in coordination with Gurgaon Traffic Police on November 15th, 2022.

- To encourage students for gardening which is one of the fast growing business idea that can save money & beautify the landscape while also helping the environment. Students enthusiastically participated in the Talk on. They learn different ways to plan and make gardening into a profitable business.

- A Blood Donation Camp in association with lions Club of Gurgaon, was organized by NSS DPG College on February 20, 2021 to encourage its students and staffs to donate their blood for a larger social benefit.

- Street Play on the Awareness of Gender Equality was organized by NSS on February 2nd, 2022 with the theme 'Save Child' felicitated individuals who had worked for women safety, health, social security, education, and skill enhancement.

- NSS DPG College organized a Rally against Plastic Use on January 24, 2021 to spread the awareness on harmful effect of plastic products, especially that of single-use plastics.

- Students enthusiastically participated in the events by planting seedlings and Quiz competition.

- DPG to collect winter clothes, blankets and shoes from the students in college and donate them to people in slums, beggars and those who can't afford to buy warm clothes.

- To increase awareness on various topics we have interactive sessions with individuals with expertise in those fields. After the recent events all over the world, a Disaster Management Talk was conducted to explain to our volunteers the causes and repercussions of such hazards

- DPG degree college promote plastic free campus for a better tomorrow. Use of Paper/Jute Bags Use of Thermocol Cups/Plates in Lunch and Tea.

- DPG college participated in an seminar on September 7, 2021. Volunteers educated govt school Students and tell them about the importance of clean India Abhiyan and motivated them to become active part of this noble activity

RECOMMENDATIONS

- Environmental parameters shall be included in purchase policy to achieve a cradle to grave approach for sustainability.
- 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
- Flow rate of taps should be checked, it should not be more than 2.5 litres/minute.
- Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Involve lower hierarchy staff in environmental awareness programmes and campaigns.
- More Messages should be displayed at various locations to Aware the People about Energy Savings
- Car-pooling practices can be adopted by campus to minimize air pollution. Increase in the display of environment-conscious posters/paintings/slogans for spreading awareness amongst students.
- Plant Ownership Program should be initiated – Several Trees should be Planted and owned by Visitors as well as students. The Nameplates should also be displayed near the plants.
- Plantation should be carried out in nearby villages.
- Messages should be displayed at various locations to Aware the Peoples 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 DPG Degree College promotes conservation of resources.

Overall 50% of DPG Degree 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 taking borewell permission, initiating drip irrigationfor gardening, and increase plantation drives and awareness sessions. Additionally, we strongly advise to sign MOU with third party authorised vendors

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

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 equiped labs

Well equiped labs

Spacious Auditorium

Smart Class rooms

Plantation drive by the students

Green landscape

Awareness campaign - No plastic use

Old clothes distribution campaign

Interactive lecture on disaster management

Awareness campaign

Cleanliness drive

Sprinklers for water conservation

Urinals for water conservation

Push Taps in water coolers and drinking area

Solar PV

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

DPG DEGREE COLLEGE

APPROVED BY UGC, AFFILIATED TO MDU (ROHTAK)

DPG DEGREE COLLEGE

ENVIRONMENT AUDIT REPORT

2020-2021

PREPARED BY
EHS ALLIANCE SERVICES

Principal
D.P.G. Degree College
Sector-34, Gurugram

Table of content

Audit certificate

EHS alliance

CERTIFICATE

PRESENTED TO

DPG DEGREE COLLEGE GURGAON

70A, Delhi-Jaipur Expy, Block A, Sector 34, Gurugram, Haryana 122001

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

ENVIRONMENT AUDIT

ACADEMIC YEAR 2020-21

The environment legal compliances and initiatives carried out by the institution have been verified on the report submitted and were found to be satisfactory.

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

EHS ALLIANCE SERVICES GURGAON

SIGNATURE

06.01.2022
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

Acknowledgement

EHS Alliance Services would like to thank the management of DPG Degree College (DPGC) for assigning this important work of Environment Audit. We appreciate the co-operation to the teams for completion of assessment.

We would like to specially thank ***Mr. Deepak Gahlot, Vice-President*** and ***Dr. S. S. Boken, Principal DPG College*** for giving us an opportunity to evaluate the environmental performance of the campus.

We would also like to *thank* ***Dr. Anita Chauhan, Audit Co-ordinator*** for her 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. Devkanya Gupta	**Co-ordinator, IQAC**
Dr. Priyanka Kumari	**Member, IQAC**
Dr. Priya Shukla	**Member, IQAC**
Dr. Lalit Kumar	**Co-ordinator, NSS**

Disclaimer

EHS Alliance Services Audit Team has prepared this report for DPG Degree College (DPGC) 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.

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

In India, the process for environmental audit was first mentioned under the Environment Protection Act, 1986 by the Ministry of Environment of forests on 13th march, 1992. As per this act, every person owning an industry or performing an operation or process needs a legal consent and must submit an environmental report or statement.

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. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the sustainable environment.

In view of the NAAC circular regarding environment auditing, the College management decided to conduct an external environment assessment study by a competent external professional auditor.

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

The ICC defines Environmental Auditing as:

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

This audit focuses on the environment legal compliances and implementation of rules defined by MoEFCC or state pollution control board. The concepts, structure, objectives, methodology, tools of analysis, and objectives of the audit are discussed below.

Introduction

Nature is very precious gift for all life forms. Disturbance in the nature causes environmental Problems. These are increasing day by day as a result of development of urbanization and industrialization on earth. Because of unplanned utilization of resources, our planet is facing tremendous pressure results a sharp rise in temperature. Therefore, there is an urgent need to plan the consumption of the resources in sustainable manner in order to conserve natural resources for future generation.

Sustainable development is becoming popular in the world for saving the earth. Utilizing resources in judicially can save the earth's precious resources. Measurement of environmental components is the most effective step to conserve and protect natural resources.

Environmental auditing had begun in the early 1970s with provision of civil lawsuits for non-compliance with environmental regulations. Environment auditing involves on site visit, collection of samples, performing analyses, and report results to competent authorities.

Industry, the corporate world is initiating auditing for saving natural resources. Academic institutions also can contribute to the preservation and conservation of resources within their premises.

In thin "Environment Audit" report would help everyone to think about preserving resources, show willingness to learn their importance, adopt steps to minimize resource use and set an example for others to follow the path of eco-friendly practices to achieve the goal of sustainable development. Effective implementation of environmental auditing helps in minimization of environmental risks at low cost.

Overview of the College

DPG Degree College, a premier higher educational institution, imparts holistic professional and vocational education. The college provides a dynamic learning environment to its students to pursue excellence, gain knowledge and acquire skill to achieve their goals. The campus is located to Gurugram.

The educational programmers of the society are dedicated for the promotion of holistic education and academic excellence in the technical arena. Along with carving a niche for itself, the Society has promoted the general advancement of knowledge by igniting the cerebral dimensions of students and by nurturing their innate talents. The vision of the society is to establish institutions of academic excellence to provide quality education which is known for the total commitment to professional education and research.

Modern world class campus spread over beautifully landscaped area, with intellectually vibrant ambience in a erene and lush green environment are among one of the most impressive ones in the State of Haryana. The wi-fi enabled campus has the state-of-art infrastructure comprising environment friendly Administrative block, academic blocks, spacious class rooms with internet and intranet connectivity and hi-tech multimedia and audio-visual equipment's, well equipped modern laboratories and lab, Learning Resource Centre, auditoriums, seminar halls etc. Besides building the learning resources, the college has also created several other facilities such as separate hostels for boys and girls, faculty and staff residence, sports facilities, medical room, open-air theatres, food courts, bookshops and other utilities and services. The College campus has playgrounds and courts for various games such as cricket, football, basketball, volleyball, badminton, well equipped gymnasium and facilities for indoor games for recreational activities of the college inmates. Athletic tracks, swimming pool and other sports facilities are also fast coming up at the campus. The world class physical and academic infrastructure developed by the College, essential for imparting quality education, facilitate teaching learning process and delight the students, faculty, corporate visitors and parents. Special emphasis have been placed on developing an environment highly conducive to build a solid foundation of knowledge, personality development, confidence building, pursuit of excellence, self-discipline and enhancement of creativity through motivation.

MISSION & VISION

VISION

To be an Institution of academic excellence with total commitment to quality education, research and improvement in human values with a holistic concern for better life, environment and society

MISSION

To provide inclusive and value-based quality education by making it accessible to all sections of the society.

To impart outcome-based holistic education through multi-disciplinary learning.

To nurture an environment that promotes healthy and strong minds by synergizing the benefits of curricular, co-curricular and extra-curricular activities.

To inculcate human values and enable students to be responsible citizens at national and global levels.

Facilities in the campus

Classrooms: The Classrooms provide the most conducive atmosphere for dynamic and focused discussion and are a significant factor in creating harmony in the teacher student relationship. The spacious classrooms have been designed to propel an enquiry based learning that fosters liberation of mind and eagerness to learn.

Computer Labs: computer labs are full air conditioned with computers of latest configurations. Furniture are meeting International standard. Labs are provided with campus wide network-Lawn Facility.

Library: The library of the College is fully computerized, is a veritable storehouse of information with ample number of text and reference books, national and international periodicals & journals, thesis & dissertations. The library has a special collection of prescribed text books called 'Book Bank'.

Sports ground: With lush green campus, sports ground becomes the very beautiful place to rejuvenate inner self. Advanced sports equipment's are provided to students so that they exuberantly participate in various events.

Cafeteria: The Cafeteria not only provides a vibrant atmosphere and unleaded fuel for the day but also puts forth a new method of knowledge sharing called the "Cafeteria approach.

Hostel: The College campus at present has 2 separate hostels for boys and girls. Boys hostels with a capacity of 150 students and girls hostel with 100 students The hostel rooms are spacious, well furnished and are provided with LAN connectivity with 24 hours internet facility, AC, reading rooms with dailies and magazines and additional indoor sports facilities.

Transport: College's network of transport buses cover all nearby neighborhood, including local communities and townships lying within the radius of 50km. It is designed for the convenience of our students and staff members who are residing outside the campus. This ensures their personal safety, travel reliability and punctuality on the campus.

Hostel

Transport

Spacious classrooms

Computer Lab

Geo Location
Geo Coordinates from Google maps:
28.4244639, 77.0206835

Audit Participants

On behalf of College

Name	Designation
Dr. S. S. Boken	*Principal*
Dr. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*
Dr. Anita Chauhan	*Audit Co-ordinator*

On behalf of EHS Alliance Services

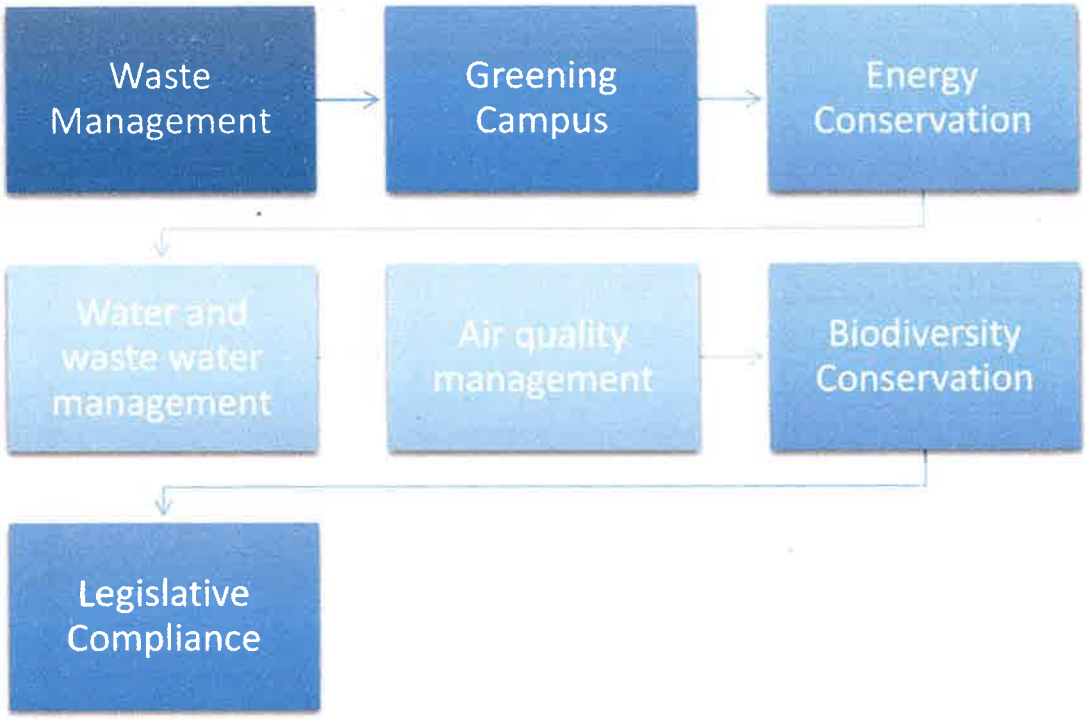
Name	Position	Qualifications
Dr. Uday Pratap	*Lead-Auditor*	*Ph.D. , PDIS, QCI – WASH, Lead Auditor ISO 14001:2015*
Ms. Pooja Kaushik	*Co-Auditor*	*M.Sc, Field Expert*

Executive Summary

The environment audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes out-dated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Our approach to promote a Green Campus to inculcate the sustainable value systems among the students, so that they carry the learning and practices them in their future endeavours. This will ensure that Sustainability and Environmental practices get embedded in all the institutions and organizations in the country.

A Green Campus is a place where environmentally friendly practices and education combine to promote sustainability in the campus which ultimately offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind.

This is very first environment audit of College for doing their bit towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.



Waste Management

TYPES OF WASTE ON COLLEGE CAMPUS

To create effective waste management plans, College first need to know the types of waste they produce. Below, we have compiled a list of various kinds of waste commonly generated on institutional campus:

1. **Food Waste** - College campus generates food waste. The average mess and canteen generates approximately 15 kg of food waste a day. The reasons for food waste on an educational campus may be over purchasing food to ensure a sufficient supply and then throwing it away, especially in canteen/cafeteria where plentiful stores are essential. And in the cafeteria, students may pile food onto their ample trays, find it unappealing once they sit down and dutifully scrape it into the garbage. Immediate attention is given to the food waste minimization techniques.

2. **Recyclable Paper, Cardboard, Plastic, Glass and Cans** -Campus tends to produce vast quantities of these recyclables. Even in the digital age, many students, professors and staff members still prefer handwritten notes and end up with piles of unwanted paper once their courses and projects are complete. The snacks so essential for socializing tend to come in recyclable plastic, glass or aluminium containers. And shipments of necessary items throughout the year are likely to arrive in recyclable plastic and cardboard packaging. The same is sold/auctioned to the scrap vendors time to time.

3. **Student Clothes and Housewares** - As we have mentioned above, many students find it more convenient to throw away their clothes and dorm furnishings at the end of the year than donate or recycle them.

4. **E – Waste - Student and facility electronics often form a large portion of a campus's waste** — As campus continually upgrade their computing facilities and office computers to keep up with the latest technology, the old computers have to go somewhere. Same is the case with old printers, phones, copy machines and other electronics that receive upgrades over the years. Discarded student electronics often become part of a College's waste stream as well. Students may throw away old phones, TVs, tablets, laptops and printers, along with cords and other accessories. Recycling is a much more eco-friendly option — the metals in old electronics often have a high reuse value.

5. **Maintenance Waste -** In the maintenance department, spent paints, solvents, adhesives and lubricants all form potentially hazardous waste. Because they are difficult to recycle, spent incandescent light bulbs usually become landfill waste. Spent fluorescent light bulbs, which contain small amounts of mercury, typically require special handling because of the environmental and health risks they pose.

6. **Furniture** - Furniture waste on a college campus has a couple different sources. The campus itself may also get rid of old furniture as it modernizes its classrooms, cafeterias, computer labs and study spaces. Annually sold to junk dealer.

7. **Books/Magazines/Newspapers -** Books accounted for solid waste generation and College often generate tons of textbook waste. As courses upgrade to new editions, they may end up throwing their newly obsolete textbooks into the garbage if donation programs cannot use them.

8. **C & D Waste -** Expansion of college campus building and renovation works result significant amount of construction and demolition waste that should be either used for back filling or disposed off through authorised dumping site by CPCB/SPCB.

9. **Solid Waste -** The College is managing solid waste by providing it to the Municipal corporation.

Energy Conservation

1. **List ten ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.**

   - *Using Energy efficient appliances*
   - *Switching off the electrical equipment when not in use*
   - *Use of Air conditioners at optimum temperatures as per the utilization schedule*
   - *LED lights*

2. **Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some**

   Yes, DPGC has adopted energy saving techniques
   - *LEDs installed*
   - *Use of Air conditioners at optimum temperatures as per the class timetable*
   - *Car pooling*
   - *Solar panels installed*

3. **How many CFL/LED bulbs has your institute installed?**

   DPGC has replaced almost 60% of the conventional bulbs and tube lights with LED Lights.

4. **Do you run "switch off" drills at institute?**

   Yes

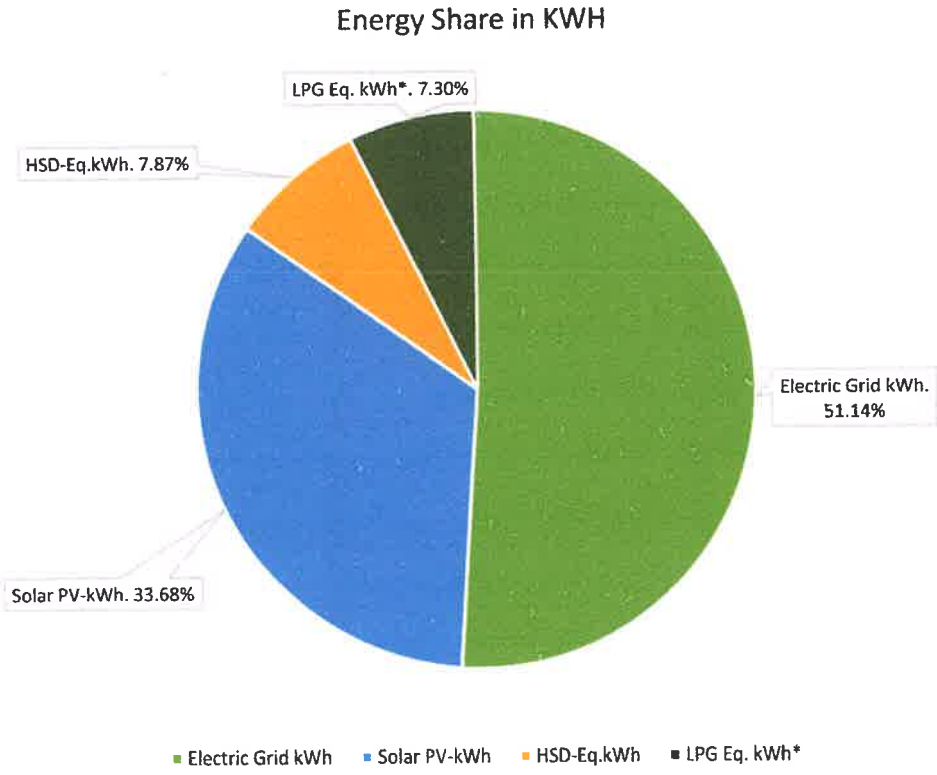
5. **Are your computers and other equipment's put on power-saving mode?**

   Yes, DPGC put the equipment on power saving mode

6. **Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?**

   Yes

Energy Share	kWh	Percentage (%)
Electric Grid kWh	287006.24	51.14%
Solar PV-kWh	189025.76	33.68%
HSD-Eq.kWh	44168.80	7.87%
LPG Eq. kWh	40972.60	7.30%
Total -kWh	561173.40	100%



Water and Waste-water Management

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 35.07 KL/month

Gardening – 611.88 Kl/month

Kitchen and Toilets – 404.39 KL/month

Others – 110.87 KL/month

Hostel – 144.45 KL/Month

Total = 1306.66 KL/Month

This water consumption is low in comparison to the normal working campus, as campus was operational in hybrid model i.e both online and offline classes were being conducted during pandemic.

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

College stores water in underground and overhead tanks.

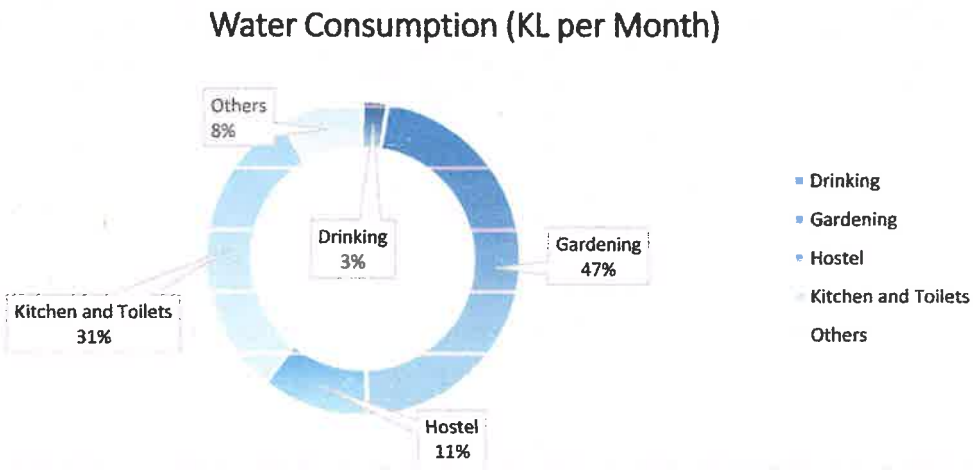
Saving Techniques

- *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. (Entry and Exit)

Entry *- Water comes from Municipal corporation and Borewell.*

Exit- *From Canteen, Toilets, Hostel and bathrooms 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*

5. Does your institute harvest rainwater?

Yes

6. Is there any water recycling System?

Yes

Air Quality Management

1. Are the Rooms in Campus Well Ventilated?

Yes, as per National Building Code, guidelines

2. Window Floor ratio of the Rooms?

Very Good, ample daylight utilization because of big windows.

3. What is the ownership of the vehicles used by your campus?

DPGC owns 10 vehicles

4. Provide details of college-owned vehicles?

Details of college-owned vehicles	Buses	Cars	Vans	Other	Total
No. of vehicles	8	2	0	0	0

5. PUC done?

Yes

6. Specify the type of fuel used by your campus's vehicles

1 Bus – Diesel
7 Buses - CNG
1 Car – Petrol
1 Car – Diesel

8. Air Quality Monitoring Program (If, Any)

No monitoring is being done

Environment Legislative Compliance

1. Are you aware of any environmental Laws Pertaining to different aspects of environmental management?

Yes

2. Does your institute have any rules to protect the environment? List possible Rules you could include.

Yes, the eco club of DPGC is conscious about the environment protection and takes proper measures in terms of awareness campaigns, activities, webinar, seminars, etc.

3. Does Environmental Ambient Air Quality Monitoring conducted by the Institute?

No

4. Does Environmental Water and Waste water Quality monitoring conducted by the Institute?

No

5. Does stack monitoring of DG sets conducted by the Institute?

No

6. Is any warning notice, letter issued by state government bodies?

No

7. Does any Hazardous waste generated by the Institute?

No

General Information

1. Does your institute have any rules to protect the environment? List possible rules you could include.

Yes, DPGC eco cub carries out various programs for environment protection periodically on the campus.

2. Are students and faculties aware of environmental cleanliness ways? If Yes Explain

Yes. DPG Degree College creates awareness through ECO Club activities, Webinars, cleanliness drives in the community.

3. Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?

Yes, World Environment Day, Ozone Day, Earth Day, and more are celebrated by campus.

4. Does Institute participate in National and Local Environmental Protection Movement?

No

5. Does Institute have any Recognition or certification for environment friendliness?

No

7. Does Institution conduct a green or environmental audit of its campus?

This is the first external audit carried out by the College.

Best Practices

- The institution provides solid waste to municipal corporation
- There is ban on single use plastic and plastic crockery in the campus.
- 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.
- The central area of the new building of college has a rainwater harvesting system for better groundwater recharge.
- The college has installed approximately solar panels (256 KW)
- Personal Vehicles (Students) are not allowed in the campus

Recommendations

- Provide sanitary waste disposal facility as per the CPCB guidelines for management of sanitary waste (as per Solid Waste Management Rules, 2016). Installation of Incinerator is recommended in campus
- Green building guidelines with ECBC compliance should be adopted for future expansion projects of the College.
- Environmental Monitoring i.e. (Ambient Air Quality monitoring, Stack Monitoring of DG sets, Water monitoring need to be conducted by State Pollution Control Committee, approved laboratory) should be conducted periodically.
- Agreement with third party authorised vendors should be done for different types of waste management, such as paper recycling, e-waste, BMW, Plastic waste, etc.
- Borewell permission should be taken from CGWA.
- Eco-friendly parameters should be included in the purchase of articles and goods for the campus.
- College should run Conservation awareness campaigns like online sessions and webinars for students and staff.

Conclusion

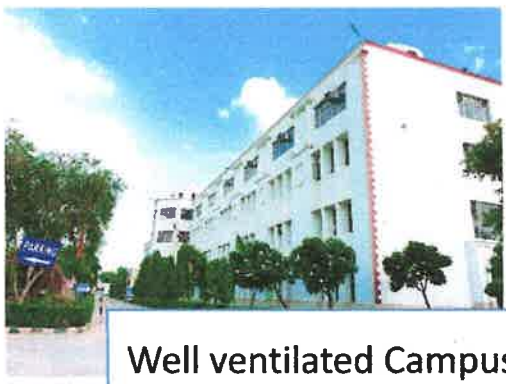
This audit involved extensive consultation with all the campus team, interactions with key personnel on a wide range of issues related to Environmental aspects. DPGC has an eco-club for sustainable use of resources.

The audit has identified some observations for making the campus premise more environmental friendly. The recommendations are also mentioned with observations for the college campus team to initiate actions. The audit team opines that the overall site is well maintained from an environmental perspective. Few things that are important to initiate urgently are waste management plan and agreement with third party authorised vendors for waste management.

References

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

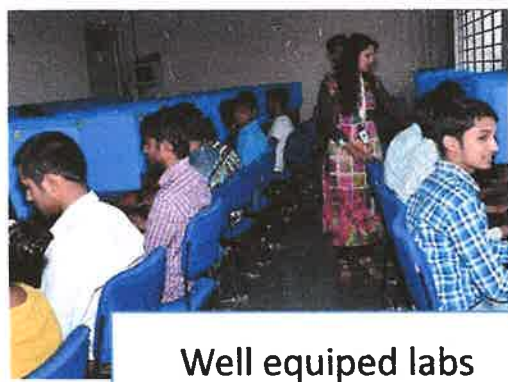
Annexure Photographs



Well ventilated Campus

Lush green campus

Classrooms

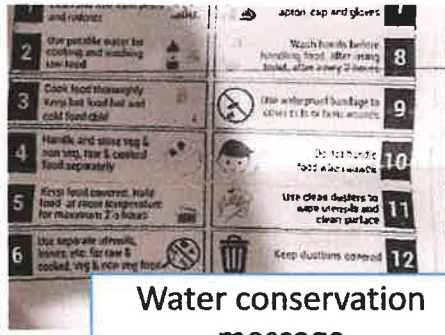


Well equiped labs

Pantation drive

World Environment Day Celebration

Waste management activity



Water conservation message

Cleanliness awareness message display

Solar PV installed on roof

Push taps installed for water conservation

Colour coded Dustbins

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

DPG DEGREE COLLEGE

APPROVED BY UGC, AFFILIATED TO MDU (ROHTAK)

DPG DEGREE COLLEGE

ENVIRONMENT AUDIT REPORT

2021-2022

PREPARED BY

EHS ALLIANCE SERVICES

Principal
D.P.G. Degree College
Sector-34, Gurugram

TABLE OF CONTENT

CERTIFICATE

EHS alliance

CERTIFICATE

PRESENTED TO

DPG DEGREE COLLEGE GURGAON

70A, Delhi-Jaipur Expy, Block A, Sector 34, Gurugram, Haryana 122001

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

ENVIRONMENT AUDIT

ACADEMIC YEAR 2021-22

The environment legal compliances and initiatives carried out by the institution have been verified on the report submitted and were found to be satisfactory.

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

EHS ALLIANCE SERVICES GURGAON

SIGNATURE

23.03.2023
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of DPG Degree College for assigning this important work of Environment Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank ***Dr. Anita Chauhan, Audit Co-ordinator,*** for her 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. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*

Last but not the least, we would like to thank ***Mr. Deepak Gahlot, Vice-President and Dr. S. S. Boken, Principal DPG 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 DPG Degree 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.

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

In India, the process for environmental audit was first mentioned under the Environment Protection Act, 1986 by the Ministry of Environment of forests on 13th march, 1992. As per this act, every person owning an industry or performing an operation or process needs a legal consent and must submit an environmental report or statement.

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. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the sustainable environment.

In view of the NAAC circular regarding environment auditing, the College management decided to conduct an external environment assessment study by a competent external professional auditor.

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

The ICC defines Environmental Auditing as:

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

This audit focuses on the environment legal compliances and implementation of rules defined by MoEFCC or state pollution control board. The concepts, structure, objectives, methodology, tools of analysis, and objectives of the audit are discussed below.

INTRODUCTION

Nature is very precious gift for all life forms. Disturbance in the nature causes environmental Problems. These are increasing day by day as a result of development of urbanization and industrialization on earth. Because of unplanned utilization of resources, our planet is facing tremendous pressure results a sharp rise in temperature. Therefore, there is an urgent need to plan the consumption of the resources in sustainable manner in order to conserve natural resources for future generation.

Sustainable development is becoming popular in the world for saving the earth. Utilizing resources judicially can save the earth's precious resources. Measurement of environmental components is the most effective step to conserve and protect natural resources.

Environmental auditing had begun in the early 1970s with provision of civil lawsuits for non-compliance with environmental regulations. Environment auditing involves on site visit, collection of samples, performing analyses, and report results to competent authorities.

Industry, the corporate world is initiating auditing for saving natural resources. Academic institutions also can contribute to the preservation and conservation of resources within their premises.

In this, "Environment Audit" report would help everyone to think about preserving resources, show willingness to learn their importance, adopt steps to minimize resource use and set an example for others to follow the path of eco-friendly practices to achieve the goal of sustainable development. Effective implementation of environmental auditing helps in minimization of environmental risks at low cost.

OVERVIEW OF THE COLLEGE

DPG Degree College, a premier higher educational institution, imparts holistic professional and vocational education. The college provides a dynamic learning environment to its students to pursue excellence, gain knowledge and acquire skill to achieve their goals. The campus is located to Gurugram.

The educational programmers of the society are dedicated for the promotion of holistic education and academic excellence in the technical arena. Along with carving a niche for itself, the Society has promoted the general advancement of knowledge by igniting the cerebral dimensions of students and by nurturing their innate talents. The vision of the society is to establish institutions of academic excellence to provide quality education which is known for the total commitment to professional education and research.

Modern world class campus spread over beautifully landscaped area, with intellectually vibrant ambience in a erene and lush green environment are among one of the most impressive ones in the State of Haryana. The wi-fi enabled campus has the state-of-art infrastructure comprising environment friendly Administrative block, academic blocks, spacious class rooms with internet

and intranet connectivity and hi-tech multimedia and audio-visual equipment's, well equipped modern laboratories and lab, Learning Resource Centre, auditoriums, seminar halls etc. Besides building the learning resources, the college has also created several other facilities such as separate hostels for boys and girls, faculty and staff residence, sports facilities, medical room, open-air theatres, food courts, bookshops and other utilities and services. The College campus has playgrounds and courts for various games such as cricket, football, basketball, volleyball, badminton, well equipped gymnasium and facilities for indoor games for recreational activities of the college inmates. Athletic tracks, swimming pool and other sports facilities are also fast coming up at the campus. The world class physical and academic infrastructure developed by the College, essential for imparting quality education, facilitate teaching learning process and delight the students, faculty, corporate visitors and parents. Special emphasis have been placed on developing an environment highly conducive to build a solid foundation of knowledge, personality development, confidence building, pursuit of excellence, self-discipline and enhancement of creativity through motivation.

MISSION & VISION

VISION

To be an Institution of academic excellence with total commitment to quality education, research and improvement in human values with a holistic concern for better life, environment and society

MISSION

To provide inclusive and value-based quality education by making it accessible to all sections of the society.

To impart outcome-based holistic education through multi-disciplinary learning.

To nurture an environment that promotes healthy and strong minds by synergizing the benefits of curricular, co-curricular and extra-curricular activities.

To inculcate human values and enable students to be responsible citizens at national and global levels.

Facilities in the campus

Classrooms: The Classrooms provide the most conducive atmosphere for dynamic and focused discussion and are a significant factor in creating harmony in the teacher student relationship. The

spacious classrooms have been designed to propel an enquiry based learning that fosters liberation of mind and eagerness to learn.

Computer Labs: computer labs are full air conditioned with computers of latest configurations. Furniture are meeting International standard. Labs are provided with campus wide network-Lawn Facility.

Spacious classrooms

Computer Lab

Library: The library of the College is fully computerized, is a veritable storehouse of information with ample number of text and reference books, national and international periodicals & journals, thesis & dissertations. The library has a special collection of prescribed text books called 'Book Bank'.

Sports ground: With lush green campus, sports ground becomes the very beautiful place to rejuvenate inner self. Advanced sports equipment's are provided to students so that they exuberantly participate in various events.

Cafeteria: The Cafeteria not only provides a vibrant atmosphere and unleaded fuel for the day but also puts forth a new method of knowledge sharing called the "Cafeteria approach.

Hostel

Transport

Hostel: The College campus at present has 2 separate hostels for boys and girls. Boys hostels with a capacity of 150 students and girls hostel with 100 students The hostel rooms are spacious, well

furnished and are provided with LAN connectivity with 24 hours internet facility, AC, reading rooms with dailies and magazines and additional indoor sports facilities.

Transport: College's network of transport buses cover all nearby neighborhood, including local communities and townships lying within the radius of 50km. It is designed for the convenience of our students and staff members who are residing outside the campus. This ensures their personal safety, travel reliability and punctuality on the campus.

Geo Location
Geo Coordinates from Google maps:
28.4744639, 77.0206835

AUDIT PARTICIPANTS

On behalf of College

Name	Designation
Dr. S. S. Boken	*Principal*
Dr. Devkanya Gupta	*Co-ordinator, IQAC*
Dr. Priyanka Kumari	*Member, IQAC*
Dr. Priya Shukla	*Member, IQAC*
Dr. Lalit Kumar	*Co-ordinator, NSS*
Dr. Anita Chauhan	*Audit Co-ordinator*

On behalf of EHS Alliance Services

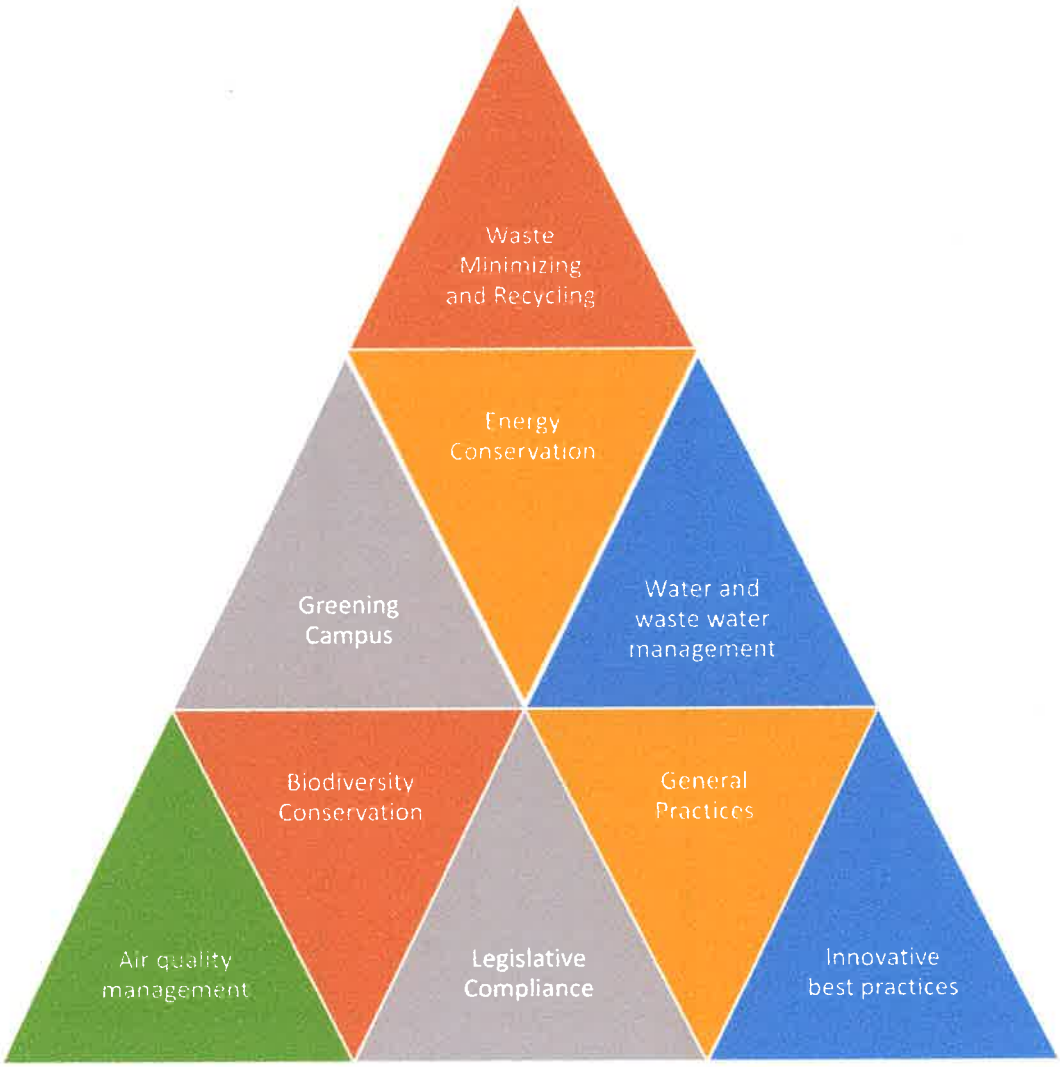
Name	Position	Qualifications
Dr. Uday Pratap	Lead Auditor	*Ph.D. , PDIS, QCI – WASH, Lead Auditor ISO 14001:2015*
Ms. Pooja Kaushik	Co-Auditor	*M.Sc., Field Expert, QCI – WASH*

EXECUTIVE SUMMARY

The environment audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes out-dated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Our approach to promote a Green Campus to inculcate the sustainable value systems among the students, so that they carry the learning and practices them in their future endeavours. This will ensure that Sustainability and Environmental practices get embedded in all the institutions and organizations in the country.

A Green Campus is a place where environmentally friendly practices and education combine to promote sustainability in the campus which ultimately offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind.

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


Waste Minimizing and Recycling
Energy Conservation
Greening Campus
Water and waste water management
Biodiversity Conservation
General Practices
Air quality management
Legislative Compliance
Innovative best practices

WASTE MANAGEMENT

TYPE OF WASTE ON COLLEGE CAMPUS

To create effective waste management plans, college first need to know the type of waste being generated at the campus. Below, we have compiled a list of various kinds of waste commonly generated on institutional campus:

1. **FOOD WASTE -** College campus generates food waste. The average mess and canteen generates approximately 10 kg of food waste a day. The reasons for food waste on an educational campus may be over purchasing food to ensure a sufficient supply and then throwing it away, especially in all hostel messes where plentiful stores are essential. And in the cafeteria or hostel mess, students may pile food onto their trays, find it unappealing once they sit down and dutifully scrape it into the garbage. Immediate attention is given to the food waste minimization techniques.

2. **RECYCLABLE PAPER, CARDBOARD, PLASTIC, GLASS AND CANS -** Campus tends to produce vast quantities of these recyclables. Even in the digital age, many students, professors and staff members still prefer handwritten notes and end up with piles of unwanted paper once their courses and projects are complete. And shipments of necessary items throughout the year are likely to arrive in recyclable plastic and cardboard packaging. The same is sold/auctioned to the scrap vendors time to time.

3. **STUDENT CLOTHES AND HOUSEWARES -** As we have mentioned above, many students find it more convenient to throw away their clothes and dorm furnishings at the end of the year than donate or recycle them.

4. **E–WASTE -** Student and facility electronics often form a large portion of a campus's waste — As campus continually upgrade their computing facilities and office computers to keep up with the latest technology, the old computers have to go somewhere. So do old printers, phones, copy machines and other electronics that receive upgrades over the years. Discarded student electronics often become part of a campus's waste stream as well.

5. **CHEMICAL WASTE -** Chemical waste on a college campus may come from numerous sources. Campus laboratories generate waste chemicals, as do cleaning services. The detergents used in campus laundry rooms eventually become waste as well. Much of these chemical substances are hazardous waste under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and must undergo specific disposal processes according to state environmental rules and regulations.

6. **MAINTENANCE WASTE -** In the maintenance department, spent paints, solvents, adhesives and lubricants all form potentially hazardous waste. Because they are difficult to recycle, spent incandescent light bulbs usually become landfill waste. Spent fluorescent light bulbs, which contain small amounts of mercury, typically require special handling because of the environmental and health risks they pose.

7. **BIOLOGICAL WASTE -** Biological waste from laboratories will require special handling and disposal as per BMW Rules, 2016. DPG Degree College has installed number of furnace to manage lab's waste at different labs.

8. **FURNITURE -** Furniture waste on a college campus has a couple different sources. The campus itself may also get rid of old furniture as it modernizes its classrooms, cafeterias, computer labs and study spaces. Annually sold to junk dealer.

9. **BOOKS/MAGAZINES/NEWSPAPERS -** Books accounted for solid waste generation and institutions often generate tons of textbook waste. As courses upgrade to new editions, they may end up throwing their newly obsolete textbooks into the garbage if donation programs cannot use them.

10. **C & D WASTE -** Expansion of campus building and renovation works result significant amount of construction and demolition waste that should be either used for back filling or disposed off through authorised dumping site by CPCB/SPCB.

11. **SOLID WASTE -** The College is managing solid waste by providing it to municipal corporation

12. **HORTICULTURE WASTE –** College campus has lavished greenery and grounds that results significant horticulture waste which is managed by municipal corporation.

ENERGY CONSERVATION

1. **List ten ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.**

A. Electricity

- *Lights, Fans, Air conditioners*
- *Lab equipment*
- *Computers in labs, faculty rooms & offices*
- *Electrical Appliances in Pantry*

B. LPG

- *Cafeteria and hostel mess*

Ways to use less energy

- *Replacing the conventional bulbs to LEDs*
- *Use of natural light when possible*
- *Use large appliances together to reduce energy use.*
- *Cleaning of Filters on regular basis and replace them whenever needed.*
- *Sealing cracks and gaps and leaks and adding insulation which leads to saving energy up to 10% on heating and cooling.*
- *Insulate the room spaces*
- *Turn off the switch on the socket after use.*

2. **Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some**

- *Electricity is saved by use of LED bulbs for illumination.*
- *In Canteen, LPG is saved by use of pressure cookers for cooking food*
- *Switch off fans and lights when not in use*
- *Various energy conservation awareness programs for students and staff*
- *Keep the computers and ACs on power saving mode.*

3. **How many CFL/LED bulbs has your institute installed?**

Approx 80 % of Total Conventional bulbs and tube lights are replaced by LED Lights.

4. **Do you run "switch off" drills at institute?**

Yes

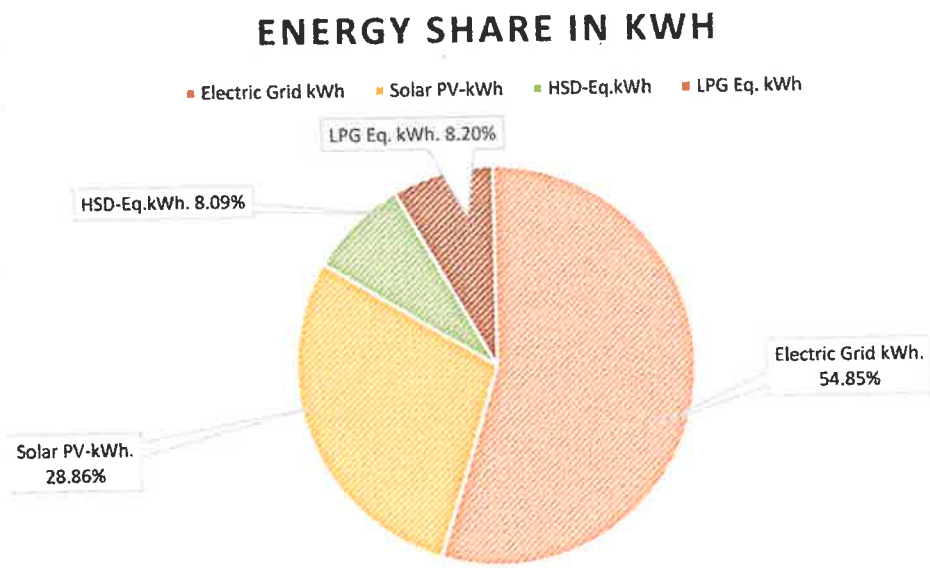
5. **Are your computers and other equipment's put on power-saving mode?**

Yes

6. **Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?**

Yes, In office hours

Energy Share	kWh	Percentage
Electric Grid kWh	328896.00	54.85%
Solar PV-kWh	173053.20	28.86%
HSD-Eq. kWh	48498.00	8.09%
LPG Eq. kWh	49174.10	8.20%
Total -kWh	599621.30	100%



WATER AND WASTE-WATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

***Drinking** – 75.71 KL/month*

***Gardening** – 554.40 Kl/month*

***Kitchen and Toilets** – 437.78 KL/month*

***Others** – 171.66 KL/month*

***Hostel** – 288.90 KL/Month*

Total = 1528.46 KL/Month

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

Available total water storage of the college

Available total water storage of the college
6 tanks of 500 litres = 3,000 litres
1 Underground tank of 10,000 litres = 10,000 litres

- *Avoid overflow of water-controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Push 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 and Exit)

***Entry** - Water comes from municipal corporation and Borewell*

Exit- *From Canteen, Toilets, Hostel, 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:

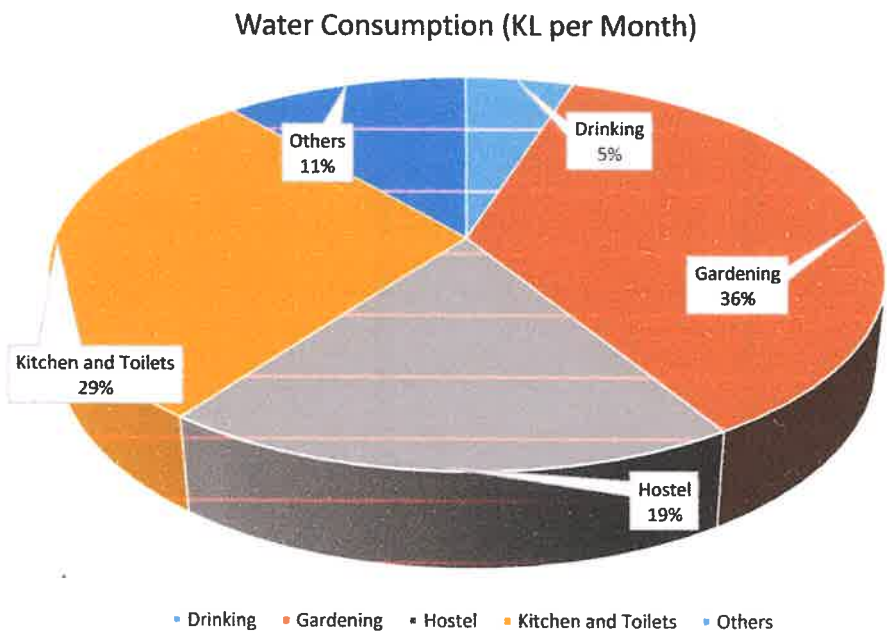
- *Close the taps after usage*
- *Water Conservation awareness for new students*
- *Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage*
- *Push tap are installed to save water*

5. Does your institute harvest rainwater?

Yes

6. Is there any water recycling System?

Yes



AIR QUALITY MANAGEMENT

1. Are the Rooms in Campus Well Ventilated?

Yes, as per National Building Code, guidelines

2. Window Floor ratio of the Rooms?

Very Good, ample daylight utilization because of big windows.

3. What is the ownership of the vehicles used by your campus?

There are 10 college owned vehicles.

4. Provide details of Institute-owned vehicles?

College has 8 buses and 2 cars

5. PUC done?

Yes

6. Specify the type of fuel used by your campus's vehicles

Below is the detail of fuels used by vehicles
7 Bus – CNG
1 Bus – Diesel
1 Car – petrol
1 Car - Diesel

8. Air Quality Monitoring Program (If, Any)

No

ENVIRONMENT LEGISLATIVE COMPLAIANCE

1. Are you aware of any environmental Laws Pertaining to different aspects of environmental management?

Yes, management is aware of environmental laws.

For following the environment policy, college has formed an eco club.

2. Does your institute have any rules to protect the environment? List possible rules you could include.

Yes, DPG degree college's eco club is conscious about the environment protection and takes proper measures in terms of awareness campaigns, activities, webinar, seminars, etc.

3. Does Environmental Ambient Air Quality Monitoring conducted by the Institute?

`No

4. Does Environmental Water and Waste water Quality monitoring conducted by the Institute?

No

5. Does stack monitoring of DG sets conducted by the Institute?

No

6. Is any warning notice, letter issued by state government bodies?

No

7. Does any Hazardous waste generated by the Institute?

No

GENERAL INFORMATION

1. Does your institute have any rules to protect the environment? List possible rules you could include.

- *Periodic Plantation drive*
- *Ban on single use plastic*
- *Biodegradable and non biodegradable waste are first segregated and then provided to municipal corporation*
- *Water and energy conservation through posters*

2. Are students and faculties aware of environmental cleanliness ways? If Yes Explain

Yes, college organizes various activities for environment cleanliness

- *Reduce carbon footprints by opting energy saving methods and using public commutes.*
- *Recycling of waste products*
- *Avoid single use plastic*
- *Less use of paper*

3. Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?

Yes, World Environment Day, Ozone Day, Earth Day, World water day, World wetland Day, Earth hour and more are celebrated by campus.

4. Does Institute participate in National and Local Environmental Protection Movement?

No

5. Does Institute have any Recognition or certification for environment friendliness?

Environmental Protection Award, 2022 by Municipal Corporation, Gurugram, Certificate is attached in annexure I

7. Does Institution conduct a green or environmental audit of its campus?

This is the second external audit carried out by the college.

INITIATIVES CARRIED OUT BY COLLEGE

- **Solid Waste Management**
  - Systematically engage with the 3Rs of environment friendliness (Reduce, Reuse and Recycle).
  - Collect paper waste produced on campus and collaborate with scrap dealers for recycling.
  - Reduce use of paper by supporting digitization of attendance and internal assessment records.
  - Reduce requirement of printed books by updating the e-books and e-journals collection of the college library.
  - Take initiatives to spread awareness amongst students about food wastage and ways of minimizing it
  - The habit of reusing and recycling non-biodegradable products
  - Organizing workshops for students on solid waste management.
  - There is ban on single use plastic and plastic crockery in the campus.

- **Liquid Waste Management**
  - Maintain leak proof water fixtures.
  - Minimize the use of water by constructing more Indian style toilets instead of western style toilets.

- Continued employment of a caretaker to take immediate steps to stop any water leakage through taps, pipes, tanks, toilet flush etc.
- Reuse of wastewater generated by the Reverse Osmosis (RO) system in washrooms.

- **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.

- **Renewable Energy**
  - The college has also installed solar PV (256 KW) on the rooftop of building.
  - The college believes in using cleaner energy such as LED lighting.

- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus

RECOMMENDATIONS

- Eco-friendly parameters should be included in the purchase of articles and goods for the campus.
- Car-pooling practices can be adopted by campus to minimise air pollution.
- The periodic maintenance schedule for solar PV, rainwater harvesting and STP to achieve optimised efficiencies.
- Environmental Monitoring i.e. Stack Monitoring of DG sets, Water monitoring, air quality monitoring need to be conducted periodically (as per SPCB).
- Agreement with third party authorised vendors should be done for different types of waste management, such as BMW, paper waste, Plastic waste, etc.
- Reduce carbon emission by reducing the LPG and diesel consumption
- Initiate the use of solar geysers in hostel
- Water metering records should be in practice for water auditing and balancing.
- Borewell permission should be taken from HWRA.

CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on a wide range of issues related to environmental aspects. Overall, 50% of college campus is for landscaping. DPG Degree College is dedicated to promote the environment management and conservation in the campus and community. The audit has identified some suggestions for making the campus premise more environment friendly. The recommendations and suggestions are mentioned for campus to initiate actions.

The audit team opines that the overall site is well-maintained from environmental perspective. The recommendations in this report highlight many ways in which the college can work to improve its actions and become a more sustainable institution.

REFERENCES

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

ANNEXURE I – ENVIRONMENTAL RECOGNITION AND COMPLIANCE

GREENOBIN

CIN: U74140DL2010PTC203115
GST:06AADCG6609F1ZO

CERTIFICATE OF RECYCLING

DATE: 09-06-2022

We hereby certify that the old records and papers of **DPG Degree College, Behind marble market Sector 34, Gurgaon** have been collected safely and securely during April 2021 – March 2022.

We further confirm that all the recovered recyclable paper has been channelized for recycling.

TOTAL WEIGHT – 5214.91 kg

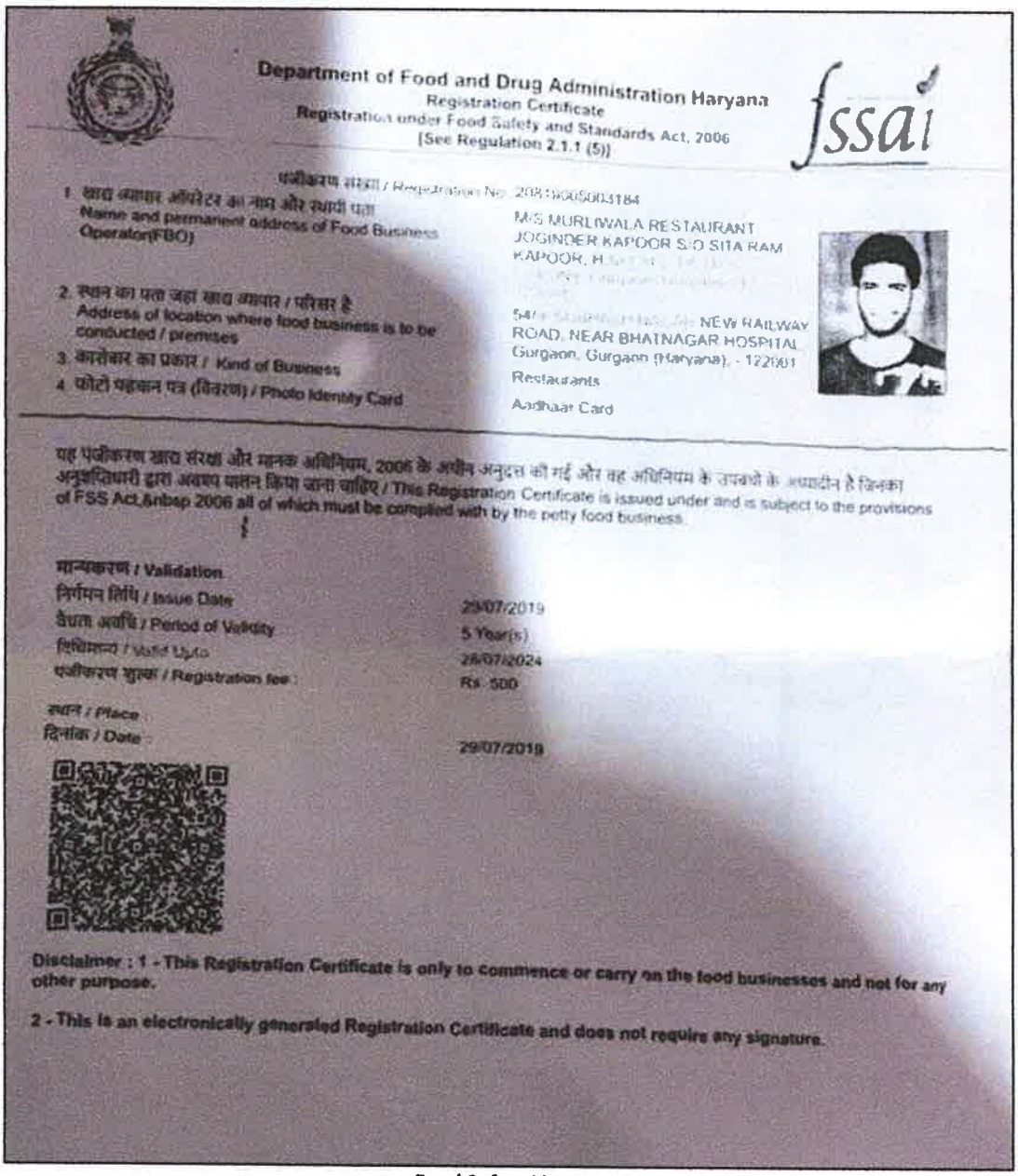
Thank you for your business

Thanking You.

For Greenobin Recycling Pvt. Ltd.

Auth. Signatory

MOU for paper ecycling



Department of Food and Drug Administration Haryana
Registration Certificate
Registration under Food Safety and Standards Act, 2006
[See Regulation 2.1.1 (5)]

fssai

पंजीकरण संख्या / Registration No: 20817000500343184

1. खाद्य व्यापार ऑपरेटर का नाम और स्थायी पता Name and permanent address of Food Business Operator(FBO): M/S MURLIWALA RESTAURANT JOGINDER KAPOOR S/O SITA RAM KAPOOR, H[illegible]

2. स्थान का पता जहां खाद्य व्यापार / परिसर है Address of location where food business is to be conducted / premises: 54/[illegible] NEW RAILWAY ROAD, NEAR BHATNAGAR HOSPITAL Gurgaon, Gurgaon (Haryana), - 122001

3. कारोबार का प्रकार / Kind of Business: Restaurants

4. फोटो पहचान पत्र (विवरण) / Photo Identity Card: Aadhaar Card

यह पंजीकरण खाद्य संरक्षा और मानक अधिनियम, 2006 के अधीन अनुदत्त की गई और वह अधिनियम के उपबंधों के अधीन है जिनका अनुज्ञप्तिधारी द्वारा अवश्य पालन किया जाना चाहिए / This Registration Certificate is issued under and is subject to the provisions of FSS Act, 2006 all of which must be complied with by the petty food business

मान्यकरण / Validation

निर्गमन तिथि / Issue Date	29/07/2019
वैधता अवधि / Period of Validity	5 Year(s)
विधिमान्य / Valid Upto	28/07/2024
पंजीकरण शुल्क / Registration fee	Rs. 500
स्थान / Place	
दिनांक / Date	29/07/2019

Disclaimer : 1 - This Registration Certificate is only to commence or carry on the food businesses and not for any other purpose.

2 - This is an electronically generated Registration Certificate and does not require any signature.

Food Safety License

Awards and certificate for green initiatives

ANNEXURE II – PHOTOGRAPHS OF ENVIRONMENTAL INITIATIVES

Well maintained campus

Green campus

Solar Panel installed on building roof

Autopush taps for water saving

Soundproof silent generators

Color-coded dustbins

Sprinklers for water conservation

Green grassland

Environment friendly transportation

Nursery

Plantation drive

Plantation drive

Cleanliness awareness drive

CLeanliness drive

Awareness poster making activity

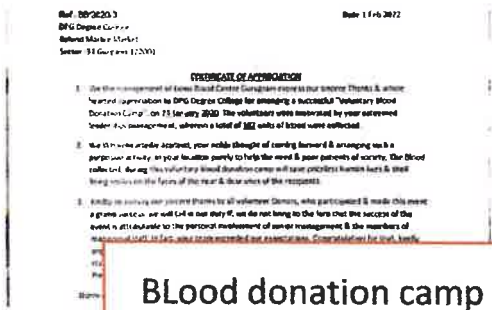
Old clothes, blankets onation activity

Awareness lecture organised by college

Awareness lecture in nearby government school

Poster making activity

No Plastic - awareness campaign



BLood donation camp

DPG college in media for awareness drive

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