GREEN AUDIT



FOR

KAMLA NEHRU INSTITUTE OF PHYSICAL AND SOCIAL SCIENCES (KNIPSS)

Post Office - KNI, Sultanpur, U.P. 228118



Green Audit Date: 06th Sep 2022

Prepared By:



Accredited from QCI-NABET

(As per the Guidelines of MoEF&CC, Govt. of India)

ISO 9001:14001:45001 Certified Company

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PREFACE

Kamla Nehru Institute of Physical and Social Sciences engaged our organization, M/s Earth Protection Group Environmental Consultant Pvt. Ltd. to carry out detailed Green Audit for their campus. We are submitting herewith the Green Audit Report.

Report prepared on the basis of site visit (physical), one to one interaction with the concerned departmental officials & physical verification of the concerned documents.

This audit report has been prepared on the basis of valuable guidelines laid down by the different organizations/statutory bodies and our experience & expertise in the field. Our team members have exercised all reasonable skills, care and diligence in preparation of this report. In spite of our sincere efforts, errors may creep in. Error, omission or discrepancy, if any, may please be noted and brought to our notice for necessary correction.

(Dr. Nelesh Agrawal)

July Many

Managing Director

M/s Earth Protection Group Environmental Consultant Pvt. Ltd.

GREEN AUDIT CONDUCTING TEAM

The details of audit team comprising the members from M/s Earth Protection Group Environmental Consultant Pvt. Ltd. (EPGEC) as well as college representatives are as under:

Name, Qualification & Experience of team	Role & Responsibility	Signature
Dr. Nelesh Agrawal Founder Director, EPGEC Ph.D. in Environmental Science, P.G. Diploma in Industrial Pollution & Management, PG Diploma in Health, Safety & Environment 21 years' experience in Environment & Industrial Safety consultancy.	 Lead Auditor Responsibility Includes: Selecting the audit team members, preparing the audit plan, audit checklist, planning scheduling and carrying out the field visit, briefing and guide the auditors to prepare the working document, reporting critical non-conformities resulting in imminent danger to the auditee, preparing audit report with the help of auditors, reporting the audit results objectively, clearly, conclusively. Evaluation of possible impacts on Air, water environment, their mitigation and management measures, Observation & implementation of corrective action to improve environmental conditions & prepare the report. Evaluation of possible impacts of Solid Hazardous Waste their mitigation and management measures, Observation & implementation of corrective action to improve environmental conditions & prepare the report Check the Final Report 	The Hard
Dr. Rajeev Kanaujia Founder Director, EPGEC Ph.D. in Environmental Science, P.G. Diploma in Industrial Pollution & Management, Post Diploma in Industrial Safety from RLI 21 years' experience in Environment & Industrial Safety consultancy.	 Auditor Responsibility Includes: Responsibility in project as Auditor for noise &vibration (NV) Site visit for baseline monitoring and data collection. Evaluation of primary and secondary data Ensuring compliance related to Noise & Vibration. Submission of Audit Finding & Non-Conformities to Project Coordinator 	Pipo.
Mr. Mohd Asif Project Manager, EPGEC M.Sc. (Env. Science) & PG Diploma in Health, Safety & Environment 13 years' experience in Environment & Industrial Safety consultancy.	Auditor Responsibility Includes: Site visit with Auditor Reporting of Any observation/findings to the Auditor Client Communication Check the Reconciliation of Report Finalize the Draft Report	त्रा <u>ः द्वापित</u> ार

Prof./Dr. Prakash	Coordinator	
Chandra Tiwari	Inform relevant officials and staff about the	
	objectives and scope of the audit; appoint	
Head (Deptt. of	officials to coordinate with auditor; provide	
Environment Sciences)	all resources needed to auditor; provide	
,	access to the facilities and evidential	
Kamla Nehru Institute of	material as requested by the auditors; co-	
	· •	
Physical and Social	operate with the auditors to facilitate	
Sciences, Sultanpur, U.P.	achievements of audit objectives; of the	
	audit results; Ensure implementation of	
	corrective actions based on the audit	
	report.	
Mr. Sushil Kumar Mishra	Coordinator	
Astt. Prof. (Deptt. of	Kamla Nehru Institute of Physical and Social	
	Sciences, Sultanpur, U.P.	
Environment Sciences)	Sciences, Suitanpur, O.F.	
KNIPSS		
Dr. Sanjay Kumar	Coordinator	
Deputy Director (IQAC)	Kamla Nehru Institute of Physical and Social	
KNIPSS	Sciences, Sultanpur, U.P.	

1.0 INTRODUCTION OF GREEN AUDIT

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyse environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience. Green audit can be a useful tool for an institute to determine how and where they are using the most energy or water or resources; the institute can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus, it is imperative that the institute evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric carbon-di-oxide from the environment.

2.0 WHY GREEN AUDIT

- In present scenario, people are not caring nature. They are directly or indirectly damaging the environment causing problems like; global warming, ecological damage, air pollution, water pollution etc.
- Green Audit is requirement of NAAC (National Assessment and Accreditation Council) for the accreditation of KNIPSS, Sultanpur, U.P.
- The intention of organizing Green Audit is to upgrade the environmental condition in and around the institute.

3.0 GOALS OF GREEN AUDIT

• The objective to carry out Green Audit is to secure the environment and cut down the threats to ecology and human health.

- To avoid the interruptions in environment that are more difficult to handle in nearby future and their correction requires high cost.
- To suggest the best protocols to add for sustainable development.

4.0 OBJECTIVES

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institute which reflects the role of the college in mitigating the present environmental problems. The KNIPSS, Sultanpur has been putting efforts to keep our environment clean since its inception. But the auditing of this non-scholastic effort of the institute has not been documented.

Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To suggest measures to improve biodiversity within the institute campus.
- To monitor the energy consumption pattern of the institute.
- To assess the quantity of water usage within the institute campus.
- To suggest sustainable energy usage and water conservation practices.
- To find out various sources of organic and solid waste generation and mitigation possibilities.

5.0 METHODOLOGY

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institute. The criteria, methods and recommendations used in the audit were based on the identified risks. The methodology includes: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the document, interviewing responsible persons and data analysis, measurements and recommendations. The methodology adopted for this audit was a three-step process comprising:

5.1 Pre-Audit Stage

- Plan the audit
- Plan the audit team
- Schedule the audit facility
- · Acquire the background information
- Visit the site/campus

5.2 On-Site Stage

- Understand the scope of Audit
- Analyze the strengths and weakness of the internal controls
- Conduct the Audit
- Evaluate the observations of Audit Programs
- Prepare a report of the observations side by side

5.3 Post-Audit

- Produce a draft report of the data collected
- Produce a final report of the final observations and the interference with accuracy
- Distribute the report to the management
- Prepare an action to overcome the flaws
- Keep a watch on the action plan

6.0 ABOUT INSTITUTE

The growth of the Institute with leaps and bound in only four decades period provided the way to rise as a multi faculty Institution with Commerce, Arts, Science, Law and Education faculties at undergraduate level and by the end of decade the Institution had post graduate programs in 8 subjects representing the aforesaid faculties. In the advent of having a fullfledged faculty of Engineering and Technology in the year 1976, the needful initiatives were taken by the Trust and as a result of consistent efforts. It was established in 1980 as a fully financed institution by government of Uttar Pradesh which is presently being looked after by a separate management committee. As a result of this development the original name as Kamla Nehru Institute of Science and Technology has also been rechristened as Kamla Nehru Institute of Physical and Social Sciences. In the same continuity two more institutions i.e. Kamla Nehru Krishi Vigyan Kendra in 1976 and Kamla Nehru Institute of Child Education in 1984 were established. With a dream to maintain academic excellence at par with any best institution of the national and international repute in the country, he created a very congenial environment and the infrastructure which is essential for the purpose. In the year 2004 a full-fledged campus on 75 acre land which falls in boundary of village Faridipur at a distance of four kilometre from the main campus, has been established under the dynamic leadership of Shri Vinod Singh, the son and successor of the founder Late Sri. K. N. Singh to cope up the demand from a large number of students in professional and technical subjects. The new campus has got six faculties viz. a college of Pharmacy, Management Studies, Education, Law, Engineering and Nursing. The new campus has got distinction bestowed with unique natural and pollution free peaceful environment on the state highway Faizabad-Allahabad bypass which also connects Lucknow, Varanasi, Allahabad & up to extreme east of U.P. In 1973 the Society was rechristened as Kamla Nehru Memorial Trust to achieve the under mentioned objectives.

THE OBJECTIVE:

- To establish, maintain and administer institutions for elementary, higher secondary, professional and higher education to benefit each and every section of the society.
- To organize & coordinate government/ non-government sponsored activities for socioeconomic and cultural empowerment of the under privileged/ economically depressed people.
- To organize and coordinate activities sponsored by state, central and international agencies for health cover, drinking water, housing, disaster management and environmental protection including soil and water conservation, land reclamation, drainage and irrigation, social and farm forestry, village sanitation and energy conservation/ management.
- Advancement of Science and Technology through teaching, research, location specific testing and technology dissemination for large scale application by the people.
- To establish libraries, information, education and communication centres for awareness, people education and advancement of welfare programmes in rural and urban areas.
- To organize non-formal, adult and continuing education for people representing rural and urban areas through Krishi Vigyan Kendra, Jan Sikshan Sansthan Industrial Training Institutes, Polytechnique and other vocational institutions.
- To organize and promote government/ non-government supported activities in public private and people partnership mode to generate greater income and employment opportunities for resource poor people in rural and urban areas.
- To aid and financially support the meritorious students/ scholars of socially and economically disadvantaged sections of the society.
- To organize government/ non-government sponsored health and welfare camps for animals and human being and to help the physically challenged people.
- To help men, women workers and artisans to organize self-help groups for promotion and management of social and economic development activities.
- To create government/ non-government assisted infrastructure for capacity building, entrepreneurship development in marketing, insurance, transportation, storage, processing etc. in farm and non-farm sectors.
- To create resources like land, building, funds and other moveable/ immoveable assets for initiating, organizing, managing and maintaining the aforesaid activities/ institution

VISION: "The aim of establishing Kamla Nehru Institute is not only building a campus for imparting education rather, to establish an institution for fight against poverty with the double resolve to translate the intention of the inhabitants of the region who fought for the struggle of freedom with great zeal and enthusiasm in the revolution of the year 1857. Kamla Nehru Institute shall be the centre for fight of economic freedom with its avowed object for excellence and economic justice".

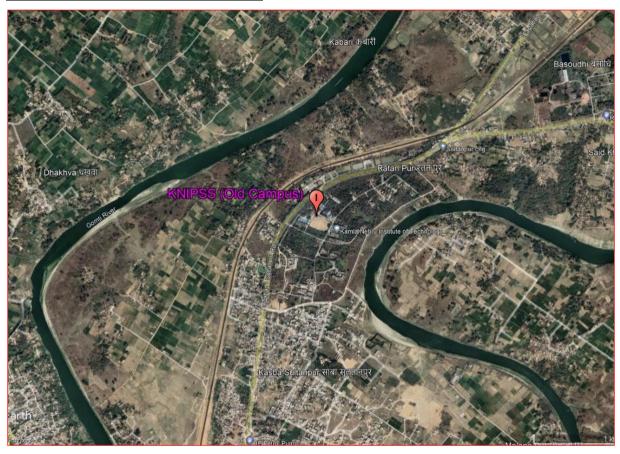
MISSION:

- To impart quality education to students, without any caste, racial, social, economic and gender discrimination.
- Use of modern technology for both innovative and effective teaching.
- To conduct career-oriented courses, to prepare them for future opportunities.
- To cultural and environmental enrichment and create disciplined as well as socially responsible citizens.
- To prepare students to face the untimely challenges and, how to successfully overcome
 it.

7.0 LOCATION OF INSTITUTE

Kamla Nehru Institute of Physical and Social Sciences (KNIPSS) is situated in Sultanpur, U.P. The coordinates of old campus and new campus are Latitude: 26°17'22.30"N, Longitude: 82° 4'52.20"E & Latitude: 26°18'15.99"N, Longitude: 82° 7'5.79"E respectively. Layout and location map of the institute are depicted below:

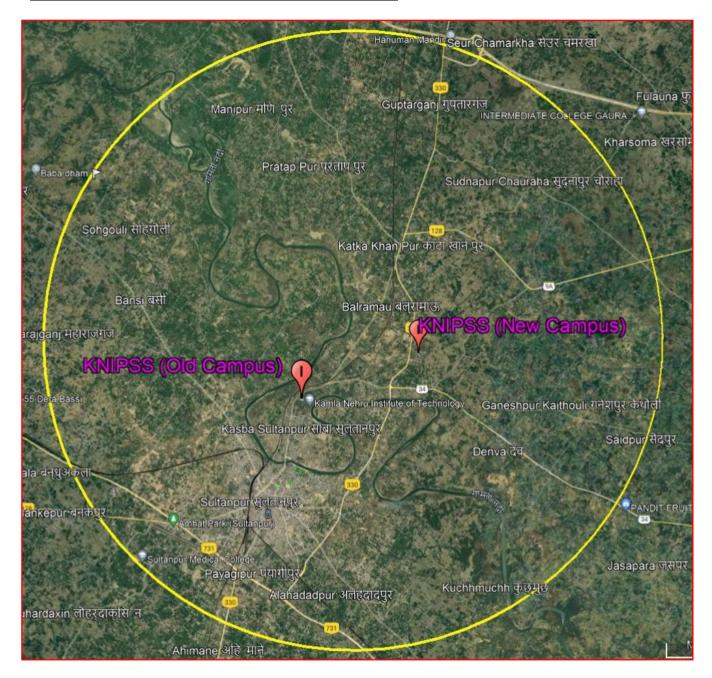
Layout Plan/Location of Old Campus



Layout Plan/Location of New Campus



Location of Institute (Both Campus) in 10 Km Radius



Map showing the location of institute (both campus) in 10 Km Radius

8.0 TOTAL AREA OF INSTITUTE CAMPUS

The entire (both) campus of institute is spread over around 37.491 Hectare area. Out of which Green Belt covered an area around 80% of the total land area. Total build-up area of institute is 179646.78 Sq. Feet.

9.0 TOTAL STRENGTH

S. No.	Particulars	Numbers
1.	Teaching Staff	154
2.	Non-Teaching Staff	105
3.	Students	11715
4.	Security guard	10
Total		11984

10.0 COMPONENT OF GREEN AUDIT

10.1 Water

Water is a natural resource; all living matters depend on water. While freely available in many natural environments, in human settlements potable (drinkable) water is less readily available. We need to use water wisely to ensure that drinkable water is available for all. Aquifer depletion and water contamination are taking place at unprecedented rates. It is therefore essential that any environmentally responsible institution should examine its water use practices. Water auditing is conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse. The concerned auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water. It is therefore essential that any environmentally responsible institution examine its water use practices.

10.1.1 Source of water

The main source of water in college campus is ground water i.e. bore well. Institute campus has 08 nos. of bore well. The details of bore well are as under:

Details of Bore Wells

Bore Well No.	Location	Dia & Depth	Pump Capacity
Bore Well-1	New Science Faculty	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-2	Admin Office	Depth: 120 Feet	03 HP
		Dia: 102 mm	

Bore Well-3	Science Faculty	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-4	Art Faculty	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-5	Commerce Faculty	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-6	Home Science	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-7	New Campus	Depth: 120 Feet	03 HP
		Dia: 102 mm	
Bore Well-8	New Campus	Depth: 120 Feet	03 HP
		Dia: 102 mm	

Suggestions/Recommendations

- > Management is advice to conduct the ground water quality analysis (outlet of bore well) twice in a year pre-monsoon and post-monsoon.
- Management is advice to install the electromagnetic water flow meter at the outlet of each borewell for the measurement of daily extraction of ground water and record should be maintained in a logbook.

10.1.2 Water Storage Facility

For the storage of fresh water required quantity of overhead PVC Tank as well as civil tank of adequate capacity are available on the roof top of building in the campus.

Each drinking water booth have the two number of over head tank on the roof top. Sample photographs of drinking water booth id depicted below:





Photographs of Drinking Water Booth with storage tank

Suggestions/Recommendations

> Drinking water dispensing machine and & overhead water storage tank should be mentioned with its cleaning date and next due date of cleaning.

10.1.3 Water Consumption Details

SNo.	Particulars	Number of Persons/Quantity	Water consumption as per NBC Norms (Litre/Head)	Total Water Consumption (In KL/Day)
1.	Teaching Staff	154 nos.	45	6.930
2.	Non-Teaching Staff	105 nos.	45	4.720
3.	Students	11715 nos.	45	527.170
4.	security guard	10 nos.	45	0.450
5.	Visitors	150 nos.	15	2.250
6.	Canteen (03 nos.)	150 Seat	35	5.250
7.	Hostel (03 nos.)	540 beds	135	72.900
8.	Laboratory	12 nos.	-	4.000
Total	Water Requirement (In	KL/Day)		623.67
			Round Up	624 KL/Day

10.1.4 Waste Water Generation & Management

Waste Water Generation

SNo.	Source of	Type of Waste	Quantity of	Disposal
	Generation	Water	Generation (KL/Day)	Method
1.	Domestic Activities	Sewage Waste	550	Septic Tank &
				Soak Pit
2.	Laboratory	Effluent	3.5	-

Management of Waste Water

All the waste water generated in the both campus institute disposed through septic tank and soak pit.

Suggestions/Recommendations

It was observed that all the waste water such as sewage waste, laundry waste water & laboratory waste water disposed through the septic tank and soak pit. An adequate capacity of Sewage Treatment Plant (STP) for the treatment of sewage waste and an adequate capacity of Effluent Treatment Plant (ETP) for the treatment of laboratory effluent is recommended inside the college campus premises and reuse the treated water in green belt, flushing etc.

10.2 Ambient Air

10.2.1 Source & Management

The source of the ambient air pollution in the institute campus is 05 number of D.G. Sets provided for the alternate electrical energy source as standby. The details of D.G. Sets are as under:

D.G. Set No.	Location of D.G. Set	Capacity
D.G. Set No01	Art Faculty	62 KVA
D.G. Set No02	Home Science Faculty	25 KVA
D.G. Set No03	Near KVK Building	25 KVA
D.G. Set No04	New Campus	165 KVA
D.G. Set No05	New Campus	62 KVA



Photograph of D.G. Set installed in Campus Area

For the control of air pollution each D.G. Set is installed with adequate height of stack. Details of average fuel consumption are as under:

DG Set Name	Location	Capacity	Fuel Consumption
D.G. Set-1	Art Faculty	62 KVA	10 Ltr/Hr
D.G. Set-2	Home Science Faculty	25 KVA	4.0 Ltr/Hr
D.G. Set-3	Near KVK Building	25 KVA	4.0 Ltr/Hr
D.G. Set-4	New Campus	165 KVA	32 Ltr/Hr
D.G. Set-5	New Campus	62 KVA	12 Ltr/Hr

Suggestions/Recommendations

- It was observed that stack monitoring of DG Set not carry out, in this regard management is advice to provide the port hole with platform to the stack of DG Set and carry out the stack monitoring at six-monthly basis.
- > It is also advice to conduct the six-monthly ambient air monitoring at least three locations in the college campus.

10.3 Noise

10.3.1 Source & Management

The source of the ambient noise in the institute campus area is 05 number of DG Set of capacity 62 KVA, 25 KVA, 25 KVA, 165 KVA & 62 KVA provided for the alternate electrical energy source as standby. Another source of ambient noise of the campus is vehicular traffic of surrounding area. For the control of noise all D.G. Sets are installed with acoustic enclosure.

10.4 Solid / Other Waste

10.4.1 Types of waste

Mainly municipal solid waste generated in the campus. To keep campus environment green and healthy, concrete provisions for the disposal of solid waste are in place. For different forms of solid waste, institute have different provisions for proper disposal. Major solid wastes generated in the campus are broken furniture, used and old files and papers, broken glass wares, empty plastic and iron cans and broken and damaged specimen and used dissecting materials, E-waste, hazardous waste from laboratories etc.

10.4.2 Management of Waste

- 1. Dustbins of different colors are installed in the campus for collection of waste. Blue dustbins are used for the disposal of paper waste. Red dustbins are used for plastic products. Green dustbins are used for biodegradable waste.
- 2. As per the requirement of the campus KNIPSS has one dumping pit. This pit is situated in science faculty behind the labs.



- 3. Institute workers collects the waste from dustbins and take it to the respective pit as well as disposed through local body.
- 4. Most of the bulk waste is sold off by the departments to scrap dealers and others are dumped in appropriate dumping site.
- 5. E-waste: For managing E- waste institute collect the electronic waste and give it to the scrap shops. Old and out of order and irreparable equipment like power supplies, frequency oscillators, printers, UPS, cartridges, lithium batteries modems, transistors, transformers, ICs etc. are disposed routinely by calling scrap dealers to keep campus free of E Waste. Students are advised not to throw and dump carelessly their useless electronic gadgets and help in making campus free of E- waste.
- 6. Hazardous (Liquid Waste): To minimize generation of liquid waste indiscriminate use of chemicals in laboratories is discouraged. But various kinds of liquid wastes are generated in the departments of science such as chemistry, zoology, and botany. Expired liquids and many used preservatives, reagents and chemicals from science labs are collected in plastic buckets. Then disposal of liquid waste is done carefully in appropriate sites so that it should not cause any danger for the environment. The waste which is soluble in water is stored in a tank which is dug in the ground.
- 7. **Hazardous (Waste Lubricant Oil)**: The generated waste lube oil disposed through service engineer of DG Set during its servicing.

Suggestions/Recommendations

- Management is advice to segregate the generated solid waste including municipal solid waste at source and should be disposed as per the "The Solid Waste Management Rules, 2016".
- > The hazardous waste generated from the chemistry laboratory should be disposed as per the "The Hazardous Waste Management Rules, 2016".
- ➤ It is advice to all the generated Plastic Waste should be disposed as per the "The Plastic Waste Management Rules, 2016".
- ➤ Management is advised to segregate the generated e-waste at source before its disposal and disposed as per "The E-Waste (Management) Rules, 2016.
- Management is advised to maintain the record of battery waste and disposed as per "The Battery Waste Management Rules, 2020".
- ➤ During construction phase, management is advice to segregate the construction and demolition waste generated during construction activities at source for their reuse and properly dispose as per the "The Construction and Demolition Waste Management Rules, 2016".

10.5 Energy (Electrical)

10.5.1 Sources

The main source of electricity is 01 number of electric connections with sanctioned load of 90 KW in old campus and 01 number of electric connections with sanctioned load of 90 KW in new campus from government.

05 number of DG Set of capacity 62 KVA, 25 KVA, 25 KVA, 165 KVA & 62 KVA available in the campus used as standby source in case of power failure.

10.5.2 Electricity Consumption

Monthly average consumption of electricity is around of Rs. 1,10,000/-. Latest copy of electricity bill is enclosed as annexure.

11.5.3 Energy Conservation measures adopted

For the energy conservation, institute campus has installed solar power system. Solar panels are installed at the roof top of institute building. The sanctioned load of solar system is 100 KVA and 356 panel installed at the roof top of both campus:



Photographs of Solar System





Photographs showing the Solar Panels at the Roof Top of Institute Campus





Photographs showing the solar based street lights in Institute Campus

10.5.4 Benefits of Solar Power System:

 After installation of solar power system, institute conserve the approximate 60% energy of total required energy.

10.6 Fire Fighting System

Essential firefighting facilities such as adequate quantity of fire extinguishers is available in each faculty of Kamla Nehru Institute of Physical and Social Sciences (KNIPSS).

Suggestions/Recommendations

Management is advice to provide the fire water storage tank as well as fire hydrant line in the both campus of institute.

10.7 Details of Green Belt

Green belt is developed on around 80% of the total land area and having various species trees, the existing green belt is regularly maintaining. The details of trees available in the campus are as under:

Details of Trees available in campus area

S.No.	Name of the Plant	Quantity
1.	Agave Americana (Century plant)	07 nos.
	Asparagaceae	
2.	Cassia fistula (Amaltaas)	14 nos.
	Fabaceae	
3.	Artemisia L. (Artemisa)	01 nos.
	Asteraceae	
4.	Ailanthus excelsa (Mahaneem)	03 nos.
	Simaroubaceae	
5.	Asparagus racemosus (Satavar)	02 nos.
	Asparagaceae	
6.	Neolamarckia cadamba (Cadamba)	09 nos.
	Rubiaceae	
7.	Azolla pinnata (Mosquito fern)	40 nos.
	Salviniaceae	
8.	Alstonia scholaris (Satparni)	22 nos.
	Apocynaceae	
9.	Bambusa indica (Bamboo)	01 nos.
	Poaceae	
10.	Callistemon lanceolatus (Bottle brush)	02 nos.

	Myrtaceae	
11.	Bauhinia (Kachnaar)	04 nos.
	Fabaceae	
12.	Delonix regia (Gulmohar)	03 nos.
	Fabaceae	
13.	Artocarpus heterophyllus (Jackfruit)	03 nos.
	Moraceae	
14.	Butea monosperma (Flame of the forest)	05 nos.
	Fabaceae	
15.	Calliandra surinamensis (Pink Tassel Flower)	01 nos.
	Mimosaceae	
16.	Mangifera indica (Aam)	07 nos.
	Anacardiaceae	
17.	Cannabis sativa (Sun hemp)	03 nos.
	Cannabaceae	
18.	Ficus religiosa (Peepal tree)	04 nos.
	Moraceae	
19.	Caryota urens (Fishtail palm)	07 nos.
	Arecaceae	
20.	Ficus benghalensis (Banyan tree)	04 nos.
	Moraceae	
21.	Catharanthus roseus (Rose periwinkle)	50 nos.
	Apocynaceae	
22.	Azadirachta indica (Neem)	10 nos.
	Meliaceae	
23.	Cinnamomum tamala (Tejpatta)	01 nos.
	Lauraceae	
24.	Pongamia pinnata (Karanj)	03 nos.
	Fabaceae	
25.	Cinnamomum zeylanicum (Dalchini)	01 nos.
	Lauraceae	
26.	Pterospermum acerifolium (Kanak champa)	11 nos.
	Sterculiaceae	
27.	Codiaeum variegatum (Garden croton)	12 nos.
	Euphorbiaceae	
28.	Polyalthia longifolia (False Ashok)	06 nos.

	Annonaceae	
29.	Ficus benjamina (Benjamin fig)	03 nos.
	Moraceae	
30.	Cupressus (Cypress)	01 nos.
	Cupressaceae	
31.	Roystonea regia (Royal palm tree)	17 nos.
	Arecaceae	
32.	Cymbopogon flexuosus (Lemongrass)	02 nos.
	Poaceae	
33.	Dieffenbachia (Dumbcane)	06 nos.
	Araceae	
34.	Diospyros malabarica (Gaub tree)	01 nos.
	Ebenaceae	
35.	Elettaria cardamomum (Cardamom)	01 nos.
	Zingiberaceae	
36.	Encephalartos	03 nos.
	Zamiaceae	
37.	Epipremnum aureum (Money plant)	04 nos.
	Araceae	
38.	Eugenia uniflora (Brazilian cherry)	01 nos.
	Myrtaceae	
39.	Euphorbia cyathophora (Dwarf poinsettia)	04 nos.
	Euphorbiaceae	
40.	Excoecaria cochinchinensis (Jungle Fire plant)	02 nos.
	Euphorbiaceae	
41.	Gladiolus grandiflorus (Sword lily)	01 nos.
	Iridaceae	
42.	Hibiscus rosa-sinensis (China Rose)	26 nos.
	Malvaceae	
43.	Hydrilla verticillate	01 nos.
	Hydrocharitaceae	
44.	Ixora coccinea (Jungle geranium)	02 nos.
	Rubiaceae	
45.	Lagerstroemia indica (Saawani)	06 nos.
	Lythraceae	
46.	Lilium	01 nos.

	Liliaceae	
47.	Lygodium japonicum (Climbing fern)	01 nos.
	Lygodiaceae	
48.	Marsilea (Water clover)	01 nos.
	Marsileaceae	
49.	Mimosa pudica (Touch-me-not)	01 nos.
	Fabaceae	
50.	Mimusops elengi (Spanish cherry)	02 nos.
	Sapotaceae	
51.	Morus alba (Mulberry)	02 nos.
	Moraceae	
52.	Murraya paniculata (Kamini)	01 nos.
	Rutaceae	
53.	Nephrolepis	02 nos.
	Nephrolepidaceae	
54.	Nyctanthes arbor-tristis (Har singar)	01 nos.
	Oleaceae	
55.	Pistia stratiotes (Water cabbage)	01 nos.
	Araceae	
56.	Platycladus orientalis (Chinese thuja)	01 nos.
	Cupressaceae	
57.	Plectranthus amboinicus (Patharchur)	01 nos.
	Lamiaceae	
58.	Plumeria pudica (Wild Plumeria)	01 nos.
	Apocynaceae	
59.	Polyalthia longifolia (False Ashoka)	03 nos.
	Annonaceae	
60.	Prosopis cineraria (Shami/Khejri)	02 nos.
	Fabaceae	
61.	Psidium guajava (Guava)	04 nos.
	Myrtaceae	
62.	Pteris vittata (Chinese brake)	02 nos.
	Pteridaceae	
63.	Punica granatum (Pomegranate)	02 nos.
	Lythraceae	

64.	Ravenia spectabilis (Lemonia)	01 nos.
	Rutaceae	
65.	Riccia glauca	02 nos.
	Ricciaceae	
66.	Salvinia natans (Water velvet)	01 nos.
	Salviniaceae	
67.	Sansevieria trifasciata (Snake plant)	02 nos.
	Asparagaceae	
68.	Saraca asoca (Sita ashok)	01 nos.
	Fabaceae	
69.	Tecoma stans (Yellow trumpet)	02 nos.
	Bignoniaceae	
70.	Terminalia arjuna (Arjun tree)	01 nos.
	Combretaceae	
71.	Thevetia peruviana (Peeli kaner)	02 nos.
	Apocynaceae	

Photographs showing the green belt







Photographs showing the green belt developed in College Campus

Suggestions/Recommendations

- Management s advice to construct the vermicomposting pits at appropriate places inside the college campus area for the degradation of horticulture waste generated in the campus (grass, tree leaves etc.) and covert in to the manure.
- It is advice to create mass awareness programme to protect biodiversity of campus among all the students, staff and workers.
- Management is advised to identify all the trees available inside the campus and record should maintained along with their location, species, diameter, height, age and geocoordinates.
- Management is also advice to display the name of plant over each tree.

10.8 Occupational Health Management

- > First Aid Box available in each department.
- ➤ Kamla Nehru Institute of Physical and Social Sciences has the tie-up with Swaraj Hospital, Sultanpur, which is situated around 02 Km. from the institute.

10.9 Rain Water Harvesting

It was observed that Rain Water Harvesting System not implemented in Kamla Nehru Institute of Physical and Social Sciences (KNIPSS).

Suggestions/Recommendations

➤ It was observed that rain water harvesting system not implemented inside the campus area, management is advice to construct the rain water harvesting pits/structures as per Model Building Bye Laws.

11.0 SUGGESTIONS / RECOMMENDATIONS

- 1. Management is advice to conduct the ground water quality analysis (outlet of bore well) twice in a year pre-monsoon and post-monsoon.
- 2. Management is advice to install the electromagnetic water flow meter at the outlet of each borewell for the measurement of daily extraction of ground water and record should be maintained in a logbook.
- 3. Drinking water dispensing machine and & overhead water storage tank should be mentioned with its cleaning date and next due date of cleaning.
- 4. It was observed that all the waste water such as sewage waste, laundry waste water & laboratory waste water disposed through the septic tank and soak pit. An adequate capacity of Sewage Treatment Plant (STP) for the treatment of sewage waste and an adequate capacity of Effluent Treatment Plant (ETP) for the treatment effluent is recommended inside the college campus premises and reuse the treated water in green belt, flushing etc.
- 5. It was observed that stack monitoring of DG Set not carry out, in this regard management is advice to provide the port hole with platform to the stack of DG Set and carry out the stack monitoring at six-monthly basis.
- 6. It is also advice to conduct the six-monthly ambient air monitoring at least three locations in the college campus.
- 7. Management is advice to segregate the generated solid waste including municipal solid waste at source and should be disposed as per the "The Solid Waste Management Rules, 2016".
- 8. The hazardous waste generated from the chemistry laboratory should be disposed as per the "The Hazardous Waste Management Rules, 2016".
- 9. It is advice to all the generated Plastic Waste should be disposed as per the "The Plastic Waste Management Rules, 2016".
- 10. Management is advised to segregate the generated e-waste at source before its disposal and disposed as per "The E-Waste (Management) Rules, 2016.
- 11. Management is advised to maintain the record of battery waste and disposed as per "The Battery Waste Management Rules, 2020".
- 12. During construction phase, management is advice to segregate the generated construction and demolition waste at source for their reuse and properly dispose as per the "The Construction and Demolition Waste Management Rules, 2016".
- 13. Management is advice to provide the fire water storage tank as well as fire hydrant line in the both campus of institute.

- 14. Management s advice to construct the vermicomposting pits at appropriate places inside the college campus area for the degradation of generated horticulture waste (grass, tree leaves etc.) and covert in to the manure.
- 15. It is advice to create mass awareness programme to protect biodiversity of campus among all the students, staff and workers.
- 16. Management is advised to identify all the trees available inside the campus and record should maintained along with their location, species, diameter, height, age and geocoordinates.
- 17. Management is also advice to display the name of plant over each tree.
- 18. It was observed that rain water harvesting system not implemented inside the campus area, management is advice to construct the rain water harvesting pits/structures as per Model Building Bye Laws.

ABOUT ENVIRONMENTAL CONSULTANT

Our Organization, **M/s Earth Protection Group Environmental Consultant Pvt. Ltd.** was registered as a Pvt. Ltd. Company in the <u>year 2000</u>. (Company Identification No. U74210UP2000PTC025670) & ISO 9001:2015,14001:2015 & 45001:2018 certified company. The organization is also accredited by QCI-NABET (Accreditation Certificate No. NABET/GWCO/IA/GW024) as for Impact Assessment Report/Hydrogeological Report for Ground Water.

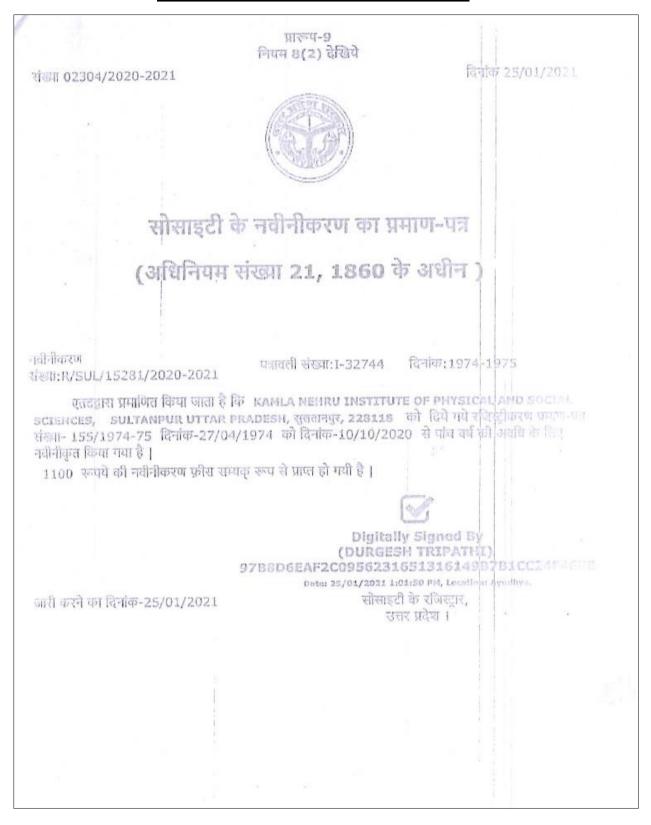
We are one of the leading consultants in the field of Environment & Industrial Safety. Our organization is providing Legal & Technical Consultancy in the field of *Environment & Industrial Safety related issues* for the last 20 years. The Company EPGEC incepted with well-equipped facilities and qualified team, offers a complete solution for Pollution Control, Industrial Safety and for Ground Water Withdrawal for industrial use under single platform. We cover a wide range of disciplines such as Analysis of Water, Soil, Noise, Air Monitoring, Environmental Audit, Green Audit, Water Audit, EIA, EMP, Impact Assessment Report for Ground Water, Hydrogeological Report, Waste Management, Safety Audit, Risk Analysis, HAZOP Study, On Site & Off-Site Emergency Plan etc. and "Design, Construction, Installation & Commissioning" further "Operation & Maintenance" of STP, ETP, RO, WTP, Swimming Pool etc. We provide training on Environment Management, Industrial Safety, Operation & Maintenance of Waste Water Treatment Plant. We also provide the services for the Preparation & Filing of Statutory Documents for CGWA, UPGWD, HWRA etc. & PCB for obtaining NOC, CTE & CTO. EPGEC's clientele is very diverse. We provide services to different client segmentsas per their requirement.

M/s Earth Protection Group Environmental Consultant Pvt. Ltd. (EPGEC) is working underthe guidance of the Managing Director, Dr. Nelesh Agrawal and Executive Director Dr. Rajeev Kanaujia. Core management of the organization is managed by Technical Personnel having specialized qualification in the field of (Environment and Industrial Safety) i.e. Doctorate and Post Graduate Degree in Environment Science &Post Graduate Diploma inIndustrial Safety. Organization also has a team of well-qualified and experienced persons from different disciplines who provide successful services to leading Industrial Houses, Government Department, Infrastructure Projects like Housing, Road, Hospitals, and Hotels etc.

QCI-NABET CERTIFICATE OF ACCREDITATION FOR IMPACT ASSESSMENT REPORT



Annexure-1 (Society Registration Certificate)



Annexure-2 (Institute/College Affiliation Certificate with University)





डा० राममनोहर लोहिया अवध विश्वविद्यालय,फैजाबाद

Letter No. Dr.RLAU/Affil./2018/ 8735

Dated: 10-09- 2018

Revised Letter

TO WHOM IT MAY CONCERN

This is to certify that Kamla Nehru Institute of Physical & Social Sciences, Sultanpur is affiliated to the Dr. RamManohar Lohia Avadh University, Faizabad and recognised by the University Grants Commission (if applicable) and the following Courses/Subjects are taught in said college as per approval-

S.	Name of the Course(s) and Duration	Affi	Period of				
No.		Permanent	Temporary	Validity for the year(s)			
1	Three year B.A. Courses in Hindi, English, Sanskrit, Urdu, Geography, Economics, Sociology, Political Science, Med. History, Education, Psychology	Perr	-				
2	Two year M.A. Course in Hindi, English, Economics, Geography, Political Science, Med. History	Perr	nanent	-			
3	Three year B.Sc. Courses in Chemistry, Physics, Zoology, Botany, Mathematics, Electronics, Microbiology, Environmental Science	Perr	nanent	-			
-\$	Two year M.Sc. Chemistry, Physics, Zoology, Botany, Mathematics, Microbiology, Environmental Science	Pen	nanent	-			
5	Three year B.Com. Course	Perr	nanent	-			
6	Two year M,Com, Course	Perr	nanent	-			
7	Three year B.Sc. Home Science Course	Perr	nanent	-			
8	Two year M.Sc. Home Science Course in Food and Nutrition, Child Development	Perr	nanent	12			
9	Four year B.Sc. Agriculture Course	Pern	nanent	-			
10	Two year B.Ed. Course	Pern	nanent	1.0			
11	Two year M.Ed. Course	Pern	nanent	. 1-01.			
12	Two year B.P.Ed. Course	Pern	nanent	1-3			
13	Three year B.B.A. Course	Pern	nanent	- 1-5			
14	Three year LL.B. Course	Pern	nanent				

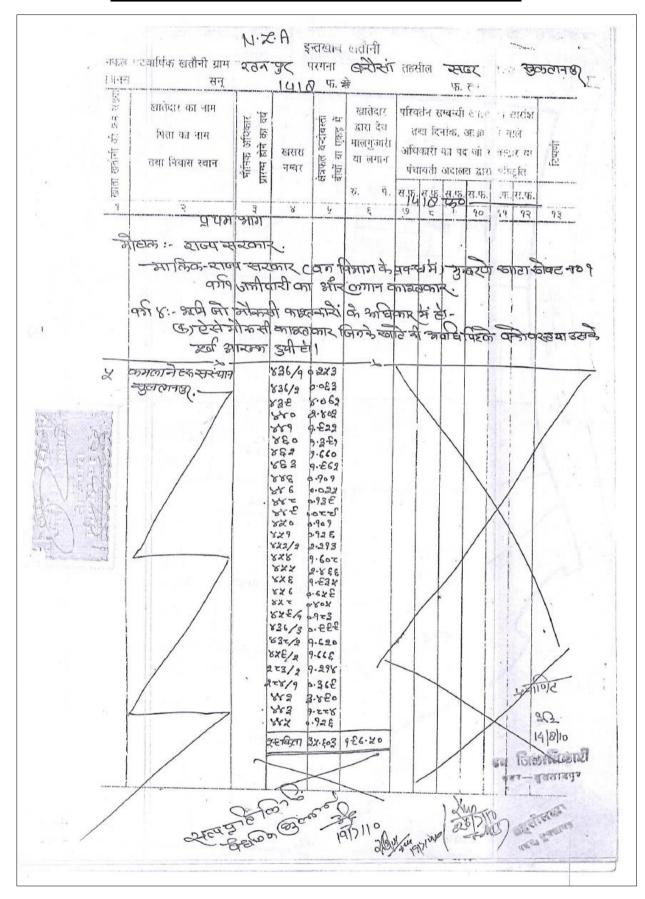
Competent Authority

(With Name, Designation, Seal and Signature) Registrar

Dr. R.M.L. Avadh University

FAIZABAD

Annexure-3 (Land Ownership Documents of Both Campus)



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