



OFFICE OF THE PRINCIPAL
BARKHETRI COLLEGE

NARAYANPUR, MUKALMUA

Dist- Nalbari: Assam- 781126

Estd.-1983

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UNDERTAKING

I hereby undertake and certify, that the following information and documents related to the Metric 7.1.3 (Quality audit on environment and energy regularly undertaken by the institution. The institutional environment and energy initiatives.) is true to the best of my knowledge and belief.

1	Green Audit
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Principal

(Dr. Bhaskar Kalita)
Barkhetri College

Principal
Barkhetri College
Narayanpur, Mukalmua
Date.....

GREEN AUDIT REPORT
BARKHETRI COLLEGE
2023



NARAYANPUR, MUKALMUA
P.O.: Mukalmua, Dist: Nalbari
Assam, Pin: 781126

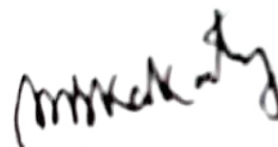
CERTIFICATE

This is to certify that the report on Green Audit conducted on Barkhetri College, Nalbari, Assam by Green Audit Team of Dimoria College is based on Primary data collected by the team visiting different areas of the college and secondary data collected from different stake holders of the college. The preparation of the report involved the team in visiting the College, taking photographs of various sites of the college and interacting with the Principal, IQAC coordinator and staff of the College. The report is prepared with utmost care collecting all relevant data.

We are thankful to the college authority for providing necessary data and information for the preparation of the report.



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Counter signed By:



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A BRIEF DESCRIPTION OF THE COLLEGE



BARKHETRI COLLEGE

Barkhetri College was established in 1983. It is a long story of the most determined struggle, selfless, dedicated service and sacrifices made to the cause of education by some distinguished persons, teachers under the guidance and leadership of Sheikh Mobaraque Hussain who was also the founder Principal of the college. The college is permanently affiliated to Gauhati University (GU), Assam, offering Bachelor of Arts (BA) degree. Besides, the college has one Distance Education Study Centers under Gauhati University. The college has metamorphosed today into a doubled streamed (Arts & Science) institutions of higher learning, offering a wide range of programmes and courses to students coming from the nook and corner of the Barkhetri constituency and its surrounding area. The college is most ideally situated in the midst of Barkhetri on the bank of Mahabahu Brahmaputra covering almost 50 bighas plot of land with its green landscape that enhances the atmosphere of the college to an educational paradise. The built-in area encompasses one RCC building. It is the 2nd oldest amongst the three undergraduate colleges in the greater Barkhetri area, being permanently affiliated to Gauhati University. The surrounding locality famous for its social harmony, unity and integrity among the inhabitants irrespective of caste, community and religion. It has been catering not only to the higher educational aspirations of the

youth of the region but also providing various employment opportunities. The college boasts of a vibrant environment through participative and decentralized involvement of students, teachers, alumni, guardians, retired teachers and local community in various perspectives and activities. A wide range programmes have been introduced in the college through 16 departments with highly qualified and experienced teachers

Vision statement of the College:

To fulfill the visionary aspirations of the young generation of the greater Barkhetri area through educational excellence and overall development of personality and to create responsible citizen.

Mission of the College:

To generate skilled teachers and quality students through teaching learning process.

To promote student friendly atmosphere for encouraging them to be self-reliant and self employable.

To promote extra-curricular activities simultaneously with curricular activities.

To develop the intellectual, physical, spiritual, moral and aesthetic powers of students, so that they may be good citizens.

To foster a vibrant atmosphere conducive to all round development of student community as well as to create proper environmental awareness among them to reduce environmental degradation.

Courses offered by the College:

UG Courses: 16

UG: Arts Subjects	UG: Science Subjects
Assamese	Botany
English	Chemistry
Education	Mathematics
Pol.Science	Physics
History	Zoology
Geography	
Economics	
Arabic	
Hindi	
Philosophy	
Sanskrit	

**Student, Faculty and non teaching staff strength of the
College:**

No. of students	1860
No. of teachers	48
No. of non teaching staff	13

Physical structure:

The College is situated in about 50 bighas of land. The College has 16 departments, 4 laboratories, 1 main library, 1 auditorium, 1 canteen, 1 conference room.

INTRODUCTION: GREEN AUDIT

Green Audit: The term “Green” means eco-friendly or not damaging the environment. Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity.

The Green Audit advice the institutions or organization to reduce the environmental effect to support sustainability. Today, environment sustainability is one of the biggest concerns across the country. Therefore, environment sustainability is very much important in all higher educational institutions because they train and produce the future leaders of this area.

The Green Audit is the most efficient ecological tool to solve environmental problems. . Earth is the only planet in the universe to sustain life because of its environment. No life can exist without suitable environment and so no human being. Increase in world population, increase in economic activities in the past few decades, enormous advancement in science & technology & globalization are leading to change in the eco system. Green campus audit is a tool of environment management system which is used methodologically for protection and conservation of environment and sustenance of ecosystem. The Green Audit or Green campus audit is a type of

assessment to make sure that the institute campus should be green with respect to the existing number of flora and fauna which not only reduce the environmental pollution of the campus but also maintain the biodiversity. Now a day's people are getting more familiar to the global issues, such as green house effect, global warming, climate change etc. University Grant Commission has mentioned: Green Campus Clean Campus mission mandatory for all higher educational institutes. So, Green Audit can be one of the initiatives for all higher educational institutes to assess their water, energy resource use, proper management of waste water, solid waste, E-waste and biodiversity conservation etc.

In the current circumstances, all higher Educational Institutes are required to provide the yearly Green Audit Report. The main purpose of the audit is to commitment to the improvement of the ecology and environment sustainability. This audit enables one institute to examine and adopt the best measures for their campuses. The audit helps with self evaluation and decision making (Self assessment).It also helps the institute to its awareness i.e., through deliberate and continuous efforts, it raises awareness to promote sustainability among everyone affiliated with the institution. Another important part of this audit is to the College can

receive the good grade of NAAC by adhering to the standards of the environment policies.

At last we can say that through Green Audit one can get direction how to improve and maintain environment of an area.

Objectives or benefits of Green Audit:

1. The Green Audit aids the institute to ensure the practices that make the environment sustainable.
2. The Audit helps the institute to diagnose the strengths and weaknesses existing in its campus.
3. There are a number of policies and standards of environmental management and the audit introduces the institute to that in order to follow those to have an eco-friendly environment.
4. The audit also helps to create awareness in and around the college to reduce health hazards.
5. The audit enables the institution to make out cost effective waste management and energy management techniques.
6. The audit plays an important role to create and promote a sustainable environment of the institute and thereby fulfills a criterion for NAAC accreditation.

Green policy of the College:

The Barkhetri College, Nalbari District of Assam is a quality conscious of environment. The College tries to maintain its own environment with its green campus initiatives and maintains a pollution free and clean campus. The Institution is committed to managing its campus in accordance with responsibilities towards promoting sustainable environment. The College has done number of activities and also decided to take more initiative to make the environment eco friendly. The College authorities maintaining the environment by planting trees, cleaning the campus and proper maintaining of the wastes etc. So, the aim of Green policy of Barkhetri College is that -the faculty, staff and students have to contribute collectively to develop an eco friendly and sustainable campus and disseminate the concept of eco friendly culture to the nearby community and wherever possible.

Preparations of Green Audit:

The Principal and IQAC team of Barkhetri College is interested for conducting Green Audit and is keen in taking up the recommendations suggested by Green Audit Team. Therefore the college authority decided to approach the Green Audit team of Dimoria College to help and prepare the report. In response to Barkhetri College, the Green Audit team of Dimoria

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College agreed to conduct the Green Audit after taking necessary permission from concerned authority of Dimoria College. After this, there was a preliminary visit to the campus to set up different criteria and questions that are necessary for preparing the audit.

Benefits of Green Audit:

To create a green campus

To create plastic free campus and try to evolve awareness of health consciousness among the stakeholders.

To make use of resource more efficiently.

To provide basis for improved sustainability.

To make financial savings in reduction of resource use.

Augmentation of College profile.

Green Audit of an institution is a tool in the management and monitoring of environmental development programs of the College.

METHODS OF CONDUCTING GREEN AUDIT:

As per discussion with the Principal of Barkhetri College, the Green audit team of Dimoria College visited the Barkhetri College on 1st of July, 2023 to conduct the survey in the college

campus. The methods of conducting Green Audit generally consist of three stages and these are as follows:

Pre-Audit Stage

Audit Stage

Post Audit Stage

In **pre audit stage**, the audit team selected the certain target areas, such as: Biodiversity of the campus, wastes disposal and management, Water management, energy conservation, air pollution, sound pollution, environmental awareness etc.

The **audit stage** includes collection of primary and secondary data, interactions with different stakeholders of different target groups identified in pre stage audit were conducted for getting the desired information.

In some of the areas, to collect data detailed discussions were held with the Principal and IQAC coordinator of the college. In this stage, the team also visited with different departments with IQAC team in order to understand the various initiatives taken by the departments towards sustainable environmental conservation. Besides these, the team also visited to different sites of the College campus, Library, office, canteen, parking area and different sites of pond area. The questionnaires were prepared for getting information and accordingly meeting with

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concerned stakeholders were conducted. The information about energy conservation along with electricity bills and consumption of water and its sources were collected from office staffs of the College.

Based on all the relevant information collected from the college, the audit team prepared the report and suggests some recommendations for future action plan and this stage is **post audit**.

AUDIT REPORT OF BARKHETRI COLLEGE:

Based on the data collected from Barkhetri College, the Audit team finally decided to take up the following criteria for preparation of green audit.

The main criteria are as follows:

1. Biodiversity of the campus
 - (a) Flora of the campus
 - (b) Fauna of the campus
2. Waste disposal Management
3. Water Management
4. Air Pollution
5. Sound Pollution
6. Energy Management.

Methods of Green Audit Preparation:

The following methods were used to prepare the report

- Selection of the different areas of the college.
- Environment related activities done by the college.
- Planning to visit the campus to collect the necessary information.
- Decision to select certain parameters feasible to prepare the report.
- Preparation of questionnaire to collect data
- Taking of necessary photographs.
- Analysis and evaluation of data
- Report preparations
- Suggestions/Recommendations to improve the campus.

The Green audit team of Dimoria College visited the Barkhetri College on 1st of July, 2023 and collected various data from different stake holders and based on this data and physical verification of different sites of the College the team prepared the following report.

Biodiversity of the Campus:

According to UN Convention on Biological Diversity (CBD), the definition is “Biological diversity” means the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. So, biodiversity is simply the number of species in a location or on Earth. Biodiversity includes the diversity within species and between different species within terrestrial, freshwater and marine ecosystems. Biodiversity plays a critical role in maintaining a healthy environment to live and thrive in. So, a good healthy ecosystem should have wide range of plants, animals and microorganisms. There are lots of ways that humans depend upon the biodiversity and so it is our responsibility to conserve it. Barkhetri College is situated in rural area of Nalbari District of Assam where farming and agriculture are practiced nearby campus. The College campus biodiversity includes different species of plants, animals and aquatic ecosystems. The campus has full of trees and two aquatic ecosystems (ponds) one on backside and another one is almost front side of the campus. The college has a play ground where a number of trees are seen. It has been noticed that vegetables are cultivated in one corner of the playground. The College administration specially

the department of Botany taking initiative for preservation of naturally grown wild Cane Plant (Bat Goss) on backside of the college campus. This is one of the green initiatives taken by the College which help the ecosystem of the college campus. Both the ponds of the college campus contains different varieties of local as well as exotic species of fishes, crabs, frogs, snakes and other aquatic animals and planktons. These are ideal for academic practices and learning sources while practicing. The college authorities who are responsible for greening the campus have taken number of initiatives to preserve local flora and fauna as well as cleaning the campus. Plantation improves aesthetics and helps as a buffer in reducing noise level, maintaining temperature of the area. The College is planning to grow different varieties of fruit bearing trees that may attract variety of insects, birds and thus increasing the biodiversity. The National Service Scheme (NSS) have done many activities to maintain the environment sustainable in and around the college campus. Various activities like cleanliness drive, tree-plantation, celebration of World Environment Day, seminars and workshops are organized by the NSS and number of Science and Arts departments of the College to increase the awareness and sensitivity among students, faculties, non teaching staff as well as common people of the locality.



Cane Preservation Site of the College

Flora of the campus:

Sl. No	Scientific Name	Local Name	Family
1	<i>Mesua ferrea</i>	Nahor	Calophyllaceae
2	<i>Trewia nudiflora</i>	Bhelkor	Euphorbiaceae
3	<i>Dalbergia sissoo</i>	Sissu	Fabaceae
4	<i>Ficus racemosa</i>	Dimoru	Moraceae
5	<i>Delonix regia</i>	Radhasura	Fabaceae
6	<i>Callistemon citrinus</i>	Bottle brush	Myrtaceae
7	<i>Ficus glomerata</i>	AyaDimoru	Moraceae
8	<i>Aurocaria columnaris</i>	X-mas tree	Aurocariaceae
9	<i>Eucalyptus globulus</i>	Eucalyptus	Myrtaceae
10	<i>Emblica officinalis</i>	Amlokhi	Euphorbiaceae
11	<i>Spondias pinnata</i>	Amora	Anacardiaceae
12	<i>Anthocephalus cadamba</i>	kadam	Rubiaceae
13	<i>Acacia procera</i>	koro	Rubiaceae
14	<i>Phoenix dactylifera</i>	khejur	Arecaceae
15	<i>Schumannianthus dichotomus</i>	Patidoi	Marantaceae
16	<i>Lagerostomia speciosa</i>	Azar	Lythraceae
17	<i>Eugenia jambolana</i>	Jam	Myrtaceae
18	<i>Syzyium cumini</i>	Borjam	Myrtaceae
19	<i>Bombax ceiba</i>	Ximolu	Bombacaceae
20	<i>Cassia fistula</i>	Xonolu	Fabaceae
21	<i>Zizyphus jujuba</i>	Bogori	Rhamnaceae
22	<i>Magnolia champaca</i>	Titasapa	Magnoliaceae
23	<i>Acacia nilonica</i>	Babul atha	Fabaceae
24	<i>Azadiracta indica</i>	Neem	Meliaceae
25	<i>Terminaliachebula</i>	Xilikha	Combretaceae
26	<i>Mimusopselongi</i>	Bokul	Sapotaceae
27	<i>Hibiscus rosa-sinensis</i>	joba	Malvaceae
28	<i>Terminaliabellirica</i>	Bhomora	Combretaceae
29	<i>Albizzialebeck /Sumaniasaman</i>	Xirikh	Fabaceae
30	<i>Ehretiaa cuminata</i>	BowalGach	Boraginaceae



Polyalthia longifolia



Delonix regia



Trewia nudiflora



Alstonia scholaris



Ehretiaa cuminata



Acacia auriculoformis



Acacia procera



Schumannianthus dichotomus



Anthocephalous cadamba



Aurocaria columnar



Fauna of the campus:

S.No.	Common Name	Scientific Name
1.	Wild goat	<i>Capra aegagrus</i>
2.	Red jungle fowl	<i>Gallus gallus domesticus</i>
3.	Magpie- robin	<i>Copsychus saularis</i>
4.	Common house gecko	<i>Hemidactylus frenatus</i>
5.	Mole Cricket	<i>Gryllotalpa</i> sp.
6.	Lesser adjutant	<i>Leptoptilos javanicus</i>
7.	Millipedes	<i>Anoplodesmus anthracinus</i>
8.	Cucurbit beetle	<i>Aulacophora indica</i>
9.	Bug	<i>Macrocheraia grandis</i>
10.	Rhesus monkey	<i>Macaca mulatta</i>
11.	Weaver ant	<i>Oecophylla</i> sp.
12.	Fly	<i>Morellia simplex</i>
13.	Red-vented bulbul	<i>Pycnonotus cafer</i>
14.	Blue Tiger butterfly	<i>Tirumala limniace</i>
15.	Crane fly	<i>Tipulidae</i> sp.
16.	Small Indian mongoose	<i>Urva auropunctata</i>
17.	Lime swallowtail butterfly	<i>Papilio demoleus</i>
18.	Rusty millipede	<i>Trigoniulus corallinus</i>
19.	Squirrel	<i>Sciuridae</i> sp.
20.	House Rat	<i>Rattus rattus</i>
21.	House Mouse	<i>Mus musculus</i>
22.	Oriental Turtle Dove	<i>Streptopelia orientalis</i>
23.	Rose-ringed Parakeet	<i>Psittacula krameri</i>
24.	Black Drongo	<i>Dicrurus macrocercus</i>
25.	Asian Koel	<i>Eudynamys scolopacea</i>
26.	House Crow	<i>Corvus splendens</i>
27.	Common Myna	<i>Acridotheres tritis</i>
28.	Crimson sunbird	<i>Aethopyga siparaja</i>
29.	Cattle Egret	<i>Bubulcus ibis</i>
30.	Banded krait	<i>Bungarus fasciatus</i>

31.	Oriental garden lizard	<i>Calotes versicolor</i>
32.	Indian bullfrog	<i>Haplobatrachus tigerinus</i>
33.	Rohu	<i>Labeo rohita</i>
34.	Catfish	<i>Walago attu</i>
35.	Climbing perch	<i>Anabas testudineus</i>
36.	Knifefish	<i>Chitala chitala</i>
37.	Stinging catfish	<i>Heteropneutes fossilis</i>
38.	Pool barb	<i>Puntius sp.</i>
39.	Olive barb	<i>Systemus sp.</i>
40.	Cyprinid fish	<i>Pethia sp.</i>
41.	Dwarf catfish	<i>Mystus sp.</i>
42.	Java barb	<i>Puntius javanicus</i>
43.	Stripped dwarf catfish	<i>Mystus tengara</i>
44.	Mola carplet	<i>Amblypharyngodon mola</i>



Macaca mulatta



Backside pond of the College



Capra aegagrus



Gallus gallus domesticus



Copsychus saularis



Hemidactylus frenatus



Leptoptilos javanicus



Anoplodesmus anthracinus



Aulacophora indica



Macrocheraia grandis



Oecophylla sp.



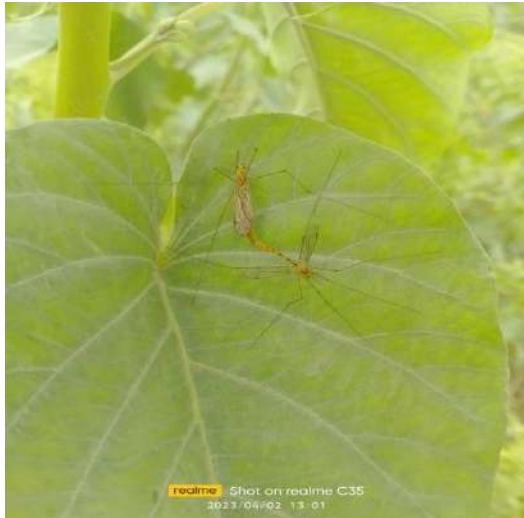
Morellia simplex



Pycnonotus cafer



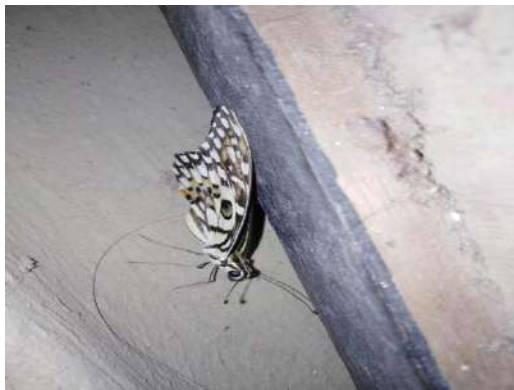
Tirumala limniace



Tipulidae sp.



Urva auropunctata



Papilio demoleus



Trigoniulus corallinus



Puntius sp.



Mystus tengara



Fish from College pond

Waste Disposal Management:

Waste can be defined as unavoidable by-product of most human activity. These wastes may be solid or liquid produced from different sources such as agriculture, domestic usages (municipal wastes) or industrial products. Waste disposal means destroying, removing, discarding or recycling of unwanted materials called wastes produced from different sources. Therefore, it is necessary to follow the correct scientific methods for waste disposal that will ensure lesser pollution and hazards for the environment. Wastes can be of numerous types and much of the waste generated today is non-biodegradable waste.

Most of the municipal solid waste is generated from households, offices, hotels, shops, schools, colleges and other institutions. The major components of MSW are food waste, paper, plastic, rags, metal and glass, besides small quantities of hazardous wastes, such as electric light bulbs, batteries, automotive parts and discarded medicines and chemicals etc.

The indiscriminate dumping solid wastes has led to the contamination of surface and groundwater supplies, whilst open burning of waste contributes significantly to air pollution. So, it has been seen that waste disposal leads to direct and indirect environmental impacts.

The aim of waste management is to reduce the dangerous effects of waste on the environment and human health. Reducing waste will not only protect the environment but will also save on costs or reduce expenses for disposal. Therefore a waste audit is important for an institution which shows an organization's waste management system. . Because it analyzes the movement of waste from generation to disposal. The purpose of waste management is to provide hygienic, efficient and economic solid waste storage, collection, transportation and treatment or disposal of waste without polluting the atmosphere, soil or water system.

The wastes generated from Barkhetri College are mainly consisting of municipal solid wastes. The solid wastes generated from the college campus includes dry leaves, food wastes, wastes from construction sites, paper waste, kitchen waste, electronic wastes etc. The food wastes generated from the college canteen and college kitchen are collected and dispose it to the ground that they dig for it. The College has number of wastes bins made of plastic and are available in different locations of the campus besides the main administrative block to collect paper and other solid wastes. The organic wastes released from the canteen or kitchen from office building are deposited in a particular location of backside

of the college which is sometimes used as fertilizer. The College has strong NSS cell and its volunteers frequently clean the college campus by collecting all types of solid Wastes and deposited it in particular place by separating plastic wastes and then burn the remaining wastes. The solid plastic and e-wastes are generally collected by outside parties.

The College being an academic institution, paper waste is one of the main solid wastes. It has been known that the college authority has taken steps to minimize the paper usage and also tries to reuse the one side used printed paper for internal communication.

The waste water released from different sources of the College such as canteen, kitchen is flowing to the outside drain of the campus. There are number of bathrooms or washroom available in the college for students, teachers, non teaching as well as for visitors. So, the main waste water released from these toilets or washrooms are collected in well constructed by College. The other sewage water is also deposited in the well near to the toilets. It has been noticed that proper drainage system inside college campus is not adequate. The rain water from the college campus are mainly flows to the outside drain but during heavy rainy season the rain water also flows to the

backside pond of the college campus. So, this may also affect the aquatic ecosystem of the pond.



Plastic Waste Bin

Water Management:

We know that around three fourths of earth's surface is covered with water. Although the earth is rich in water, only one percent is liquid fresh water, the form we require for our highest priority needs. The demands of fresh water are growing day by day and many feels that the shortage of fresh water in future will be eminent. If we do not do something now to conserve water our future generation will not be able to have access pure water. Therefore, water conservation and management not only play an important role to protect the water but also has economic benefits and helps to protect the environment.

Water is a renewable resource, but only when it's managed well. If it isn't, the world faces serious consequences. Climate change, aquifer depletion, and pollution threaten the amount of water available. We need water for our biological survival and for various other purposes like irrigation, in industries, cooking, cleaning, bathing, etc.

Water is a basic necessity. All plants and animals need water to survive. There's a scarcity of water. To avoid this scarcity, water is saved and managed efficiently. Therefore, the audit team visited water sources of the college campus and noticed that for consumption of water main source is boring water. There are two numbers of boring and this two sources is well connected to different storage tank which moves into different buildings. Besides, there are two hand pumps in the campus which are used to irrigate the water in the plants of the college as well as construction works. Sometimes pond water is also used in the construction purposes. The ponds of the College require proper maintenance as well as cleanness for aquatic animals. It has been found that around 50 liters of water per day is lost through the leaking of pipes and through tube well. During winter 2500 to 3000 liters (approximately) of water is used per day by the college for different purposes. As per information, the consumption of water in the summer, mainly

during the months of June to September is significantly increased compared to other months. During summer period the consumption water is approximately 3000 to 4000 liters. The College has three aqua guards and 12 toilets where a lot of water is used for drinking, cleaning purposes. The College authority can install rain water harvesting system to reduce the consumption of water. The College has two water tanks that are installed in different blocks and for different purposes.

Average report of water consumption per day (Bore well):

Types of water uses(During Summer)	Water uses/ person / day/Avg(L)	No.of persons using water	Total water consumptions per day (L)
Drinking	1.0	1921	1921.00
Toilet Flash	5.0	200	1000.00
Washing hands and face	1.0	650	650.00
Cooking(Avg)	50(Canteen)		50.00
Washing utensils(Avg)	100	Canteen employees	100.00
Water losses during uses(Avg)	50		100.00
Cleaning toilets	200		200.00
Total Consumption			4021.00

Water management is necessary as it creates awareness about the need for water conservation and builds capacities of all the stake holders of the college for better management and long-term sustainability of water resources.





Air Pollution:

Air pollution is the contamination of air due to the presence of substances in the atmosphere that are harmful to the health of humans and other living beings, or cause damage to the climate or to materials. The combustion of fossil fuels by vehicles such as jeeps, trucks, cars, buses, etc. emits gases, such as sulphur dioxide etc. pollute the environment. These are the major sources of greenhouse gases and cause various diseases among individuals. The household cleaning products and paints contain toxic chemicals that are released in the air. The burning of waste material inside the campus of the schools, colleges also creates air pollution. Air pollution is a major contributor to global warming and climate change. Air pollution is indeed a significant risk factor for human health conditions, causing

allergies, respiratory and cardiovascular diseases as well as lung damage.

Barkhetri College is situated in rural area of Nalbari district of Assam. After visiting the entire campus of the college it has been noticed that the College campus is almost free from air pollution. The College is also situated half a kilometer away from the main vehicular road which protects the college environment from vehicular pollution. It has also been observed that most of the vehicles are parked inside the campus near to the administrative block and some departments. There are around 25nos.of four wheelers and 50 nos. of two wheelers daily come to the college and park inside the campus. Though the numbers of vehicles are very few but that may release smokes and carbon inside the campus. This may not be sufficient to pollute the air but it is advisable to park the vehicles a little bit away from the office buildings or classrooms and in a proper parking place.

After conversation with concerned staffs it has come to our knowledge that the College burns the dry leaves and some other wastes inside the campus once or twice in a month to clean the campus. But burning of such dry materials may also affect the air of the college campus.

The College authority is also sometimes run the Generator during the power cut. The surroundings of the college are covered mainly by paddy field, trees and marshy areas. The transportation of outside vehicles inside the College campus is almost negligible. The majority of the students come to the College using bicycles instead of two wheelers.



Parking of vehicles inside the college campus

Sound Pollution:

Among the environmental pollution, Sound Pollution also known as Noise Pollution is one of the most rampant pollutions we find in the world. Sound or noise pollution can be defined as unwanted or excessive sound that can have deleterious effects on human health, wildlife, and environmental quality. Noise pollution is commonly generated in an area due to many industrial facilities, from highway traffic, railway, and airplane traffic and from outdoor or sometimes indoor construction activities.

Sound is a physical form of pollution which directly not affects any element of the environment that means it does not have a direct effect on the land, air, soil or any other such life-supporting elements. Basically, excess of sound or noise causes disturbance and imbalances the day-to-day life of humans and animals. But all these sources of sound pollution are manmade.

All the sources of noise pollution are man-made in nature. One of the most common and harmful sources is the noise caused due to various transportation systems and motor vehicles in particular. Factories, printing presses, mills, metal works, etc. are all contributing to the noise pollution of the area.

The audit team observed that around twenty five number of four wheelers and around 40-50 two wheelers come to the college in the morning and leave the campus in the evening every day. These vehicles are used by faculty members, office staffs and students. So, these vehicles usually not create that much of sound problem as it comes in the morning and leave in the evening. As per information of the IQAC coordinator, very few visitors usually come to the college with vehicles. The Generator of the College runs only when there is power cut. There is as such no such machine in the campus which can create sound. The generator also not creates that much of sound problem as it is little bit away from the college buildings. So, there is less chance of making any sound pollution during college hours. There is no chance of sound pollution from the vehicles plying in the road as the college is situated in the rural area as well as half a kilometer away from the main road.



Energy Management:

Energy management is the best answer for direct and immediate reduction of energy expenditure for business, households and any institutions. Energy management can be broadly defined as the proactive, organized and systematic management of energy use in a building or organization to satisfy both environmental and economic requirements. Specific requirements and practices differ by organization to organization but the main principles apply to all organizations is basically same. Every institutions main motive is to reduce the energy bill with proper utilization of energy. So, it involves many steps, such as-identifying opportunities to save energy, taking action to save energy and collecting the energy data and metering the energy consumption.

The audit team interacted with the concerned office staff of the college to get an idea of energy consumption and energy bill. The team collected the information of electrical appliances used in the campus. The different electrical appliances used by the college are shown in the following table:



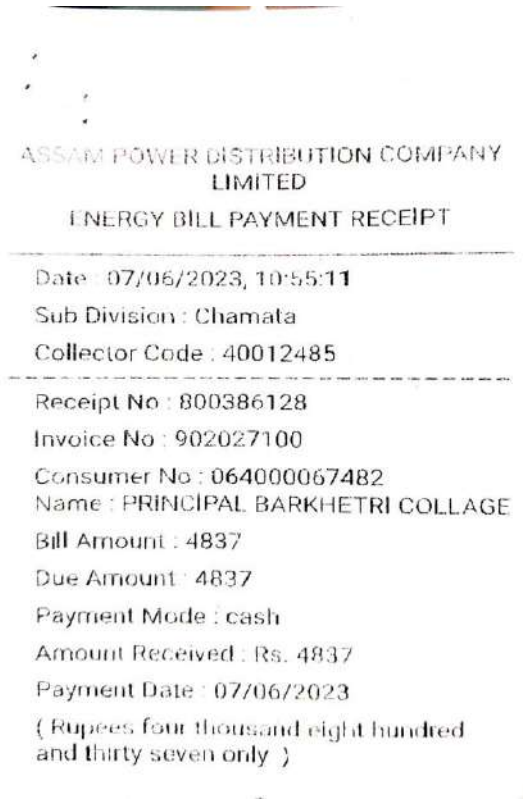
SI No.	Electrical appliances used	Total numbers
1	Computer	14
2	Printer	03
3	Xerox machine	05
4	Ceiling Fan	91
5	Tube lights	23
6	Aqua guard	03
7	Exhaust	02
8	Inverter	03
9	DG	01
10	Solar Panel	01
11	Water pump	03
12	Hand pump	01
13	Light used in the night (Tube+Bulb)	05
14	LED	71

For preparing food the college has two numbers of gas cylinders. It has been observed that common electricity meter is provided for the entire college. The electricity bills for energy consumption in the month of April & May, 23 is shown below. The bill amount is Rs.3491/- & Rs.4837/- respectively. As per information received from office staff the electricity bill for every month is not fixed and it varies time to time. But the consumption of electricity increases in summer seasons and it goes to around Rs.6000 to 7000/-

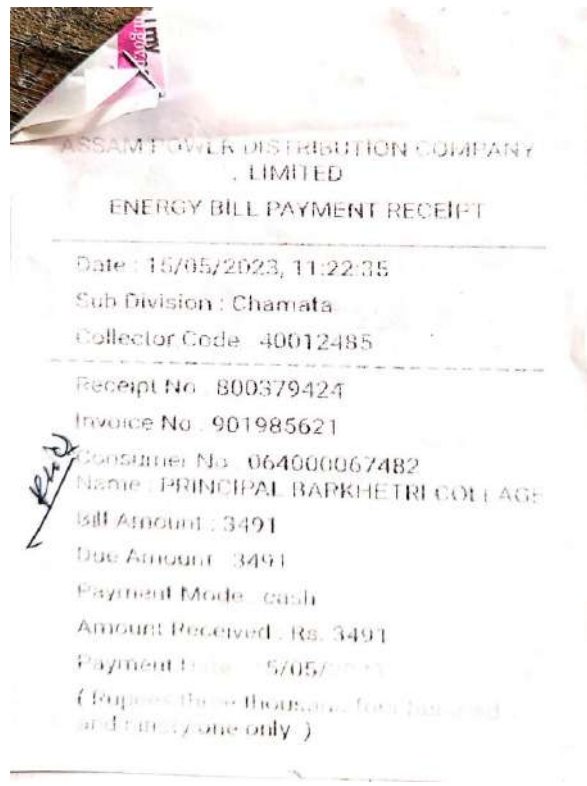
It has been observed that the students, teachers as well as office staff switch of the lights, fans, computers, Xerox machine

etc. when not in use. The College authority has taken initiative to replace the incandescent bulbs and tube lights with LED bulbs. The College also tries to run the water pump one time daily to minimize the consumption of electricity.

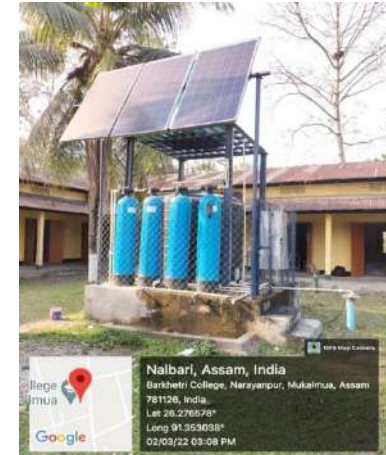
The solar panel inside the college campus is not functional. They are using 5nos.tubelight and common bulb for the night vision in the campus. This may also increase the electricity bill which may be reduced by introducing new or repairing the existing solar panel in the campus.



Electricity bill for the month of May,23



Electricity bill for the month of April,23



SUGGESTIONS OR RECOMMENDATIONS:

- It is advisable to grow for more plantations of timber plants as well as specially fruit bearing plants and develop a locally available medicinal plant garden inside the college campus.
- The plant should be properly identified and scientific names of each plant are desirable with local names.
- More awareness program related to plantation is necessary.
- The backside pond of the College needs cleaning and proper maintenance is required for preservation of aquatic life.
- It is advisable to use the water judiciously and reduce the loss of water.
- Rain water harvesting system is required in the college campus.
- The backside pond of the College requires proper maintenance so that the water for construction and other activities of the college can be used.
- It is advisable to use solar light in the campus for night instead of tube lights or LED bulb to reduce the electricity cost.
- It is advisable to put stickers on the switch board of the classroom displaying the switch off the light and fan when there is no class.

- To keep the dry waste and wet wastes a proper concrete chamber should construct.
- It is advisable to use environment friendly bamboo waste bin inside the campus instead of plastic bins.
- Bio-waste: Composting system to be adopted.
- The vehicles should be parked in proper parking area to reduce the air and sound pollution.

Conclusion:

The Barkhetri College is predominantly an undergraduate College, there are significant environmental activities both by faculty and students. The environmental awareness initiatives are considerable one. The initiative taken by the administration to conserve the wild cane cultivation inside the college campus is note worthy. The installation of solar panels (which is at present not functional), paperless work system and vermicomposting practices are worth mentioning. Besides, environmental awareness programmes initiated by the faculty as well as students shows how the campus is going green. Few recommendations are added to improve the environment of the college to more eco-friendly using scientific techniques. This may lead to the prosperous future in context of Green Campus & thus sustainable environment and community development.

APPENDIX-1 (Activities done by the College)



NSS program on world environment day



NSS program on National Voters' day



APPENDIX-2: PHOTOGALARY OF BARKHETRI COLLEGE

