

DR. B.K.B. COLLEGE PURANIGUDAM

Estd. 1967



GREEN CAMPUS

GREEN LIFE

GREEN FUTURE



GREEN AUDIT REPORT

2022-2023

DR. B.K.B. COLLEGE, PURANIGUDAM

NAGAON (ASSAM)-782141

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Introduction

Environmental audits are tools that companies and other organisations use to identify or define their full range of environment impacts and assess their institutions' compliance with applicable laws and regulations, as well as with the expectations of their various stake holders. They also serve as means to identify opportunities to save money, enhance work quality, improve employee health and safety, reduce liabilities, and achieve other forms of eco-friendly and conducive environment for an academic institution. The aim of Green Audit may be defined as an attempt to analyse the environmental practices within and outside the college and to assess its impact on the eco-friendly ambience as a whole. At a time when we are face to face with environmental degradation and ecological crisis, it has become essential for higher educational institutions, as well, to incorporate practices that would provide and promote the process of regeneration and sustainability. Green Audit can be said to be a seed for greater change and development for the future in this concern.

INTERNAL AUDIT TEAM:

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2.	Mrs. Akashee Bhuyan	Vice-Chairman	Assistant Professor, Department of Geography (HOD), Dr.B.K.B. College, Puranigudam
3.	Mrs. Afsana Parveen	Coordinator	Assistant Professor, Department of Economics, Dr.B.K.B. College, Puranigudam
4.	Mrs. Debita Kemprai	Member	IQAC Joint Coordinator, Assistant Professor, Department of Geography , Dr.B.K.B. College, Puranigudam
5.	Dr. Assaduz Zaman	Member	Assistant Professor, Department of History, Dr.B.K.B. College, Puranigudam
6.	Dr. Jahangir Hussain Alom	Member	Assistant Professor, Department of Education, D r . B.K.B. College, Puranigudam
7.	Mr.Jitya Ranjan Saikia	Member	Assistant Professor, Department of English, Dr.B.K.B. College, Puranigudam
8.	Mr.Bhargab Das	Member	Assistant Professor, Department of Economics, Dr.B.K.B. College, Puranigudam

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DR. B.K.B. COLLEGE PROFILE

Dr B.K.B. College established in 1967 has gradually emerged to be a premier institution of higher education in a rural ambience. This centre for higher education came into being under the able leadership and guidance of several leading citizens of Puranigudam. It was, in fact, a very adventurous project to which all the people, rich and poor contributed at their own strength. Dr. B.K.B. College owes a great deal to those dedicated souls trying every plan to realize a long-cherished dream. We take pride at their noble efforts.

The college is named after Dr. Birinchi Kumar Barooah - a dedicated teacher, folklorist, research scholar and a renowned litterateur of Assam who was born in the famous *Kharangi Barooah* family of Puranigudam. Dr. B.K.B. College has successfully come through the National Accreditation Programme in September, 2004 initiated by the University Grant Commission (UGC) and was re-accredited by NAAC in January, 2011. The college celebrated its silver Jubilee in the year 1993 and it's Golden Jubilee in the year 2017. Both the events particularly the Golden Jubilee were celebrated with memorable events amidst enthusiastic response from all the stake holders, student, and alumni. Presently we have been setting the stage for the third cycle accreditation of the college by NAAC. The college campus maintains an excellent environment for teaching-ICT added classrooms, computer lab, library and a mechanism of curriculum extension interface. Evergreen trees, flower garden and the Kolong River at the back of the college auditorium add to its beauty.

The college offers two years Higher Secondary Course under Assam Higher Secondary Education Council (Arts and Commerce stream) and Three Years Degree Course under Gauhati University in Arts, Commerce and B.Voc. B.Voc in Physical Education and Information Technology has been introduced recently in view of the prevailing compelling situation of unemployment. A student pursuing B.Voc will certainly have his/her competence to secure a scope for self-employment. About one thousand students get their regular education up to degree standard with major in seven subjects. Three new general subjects viz. Sociology, Psychology and Sattriya Dance have been introduced recently. Apart from the regular course of study, a number of students get enrolled in Institute of Distance and Open Learning (IDOL) under Gauhati University, Krishna Kanta Handique State Open University and Diploma in Elementary Education Course (D. El. Ed.) every year. Also, other courses offered by the institution are UGC approved Diploma in Cosmetology, Sattriya Dance and Computer Application (One Year) and Certificate courses in five subjects i.e. Creative and Critical Thinking; Art of Speaking and Writing English; Statistical Data analysis for Project Report preparation; Computer Application and Yoga for Health. With the celebration of its Golden Jubilee year in 2017 the institution humbly announces its steady progress, serious commitment to quality education.

TOTAL CAMPUS AREA AND COLLEGE BUILDING SPREAD AREA

1.	Campus Area	2.45 acres
2.	Built up Area	3643.5 sq.mts.

PREVIOUS NAAC GRADING

Sl.no.	Cycle Info	Grade	CGPA	Accreditation year
1.	Cycle 1	68	C++	2004
2.	Cycle 2	2	C	2011
3.	Cycle 3	3.09	A	2023

GREEN AUDIT DR.B.K.B. COLLEGE, PURANIGUDAM, NAGAON

CERTIFICATE

This is to certify that Green Audit for Dr.B.K.B. College, Puranigudam, Nagaon has been conducted in the month of December, 2021 to assess institutional performance against its environmental policies and objectives and its impact on the environment which include Flora and Fauna, Water, etc. Further, it is certified that assessment has been made on the original data collected on site and verified by green auditing team for validity and reliability. Photographs and data are genuine and are taken directly by the audit team or indirectly provided by the internal audit team.

External Auditors:

1.



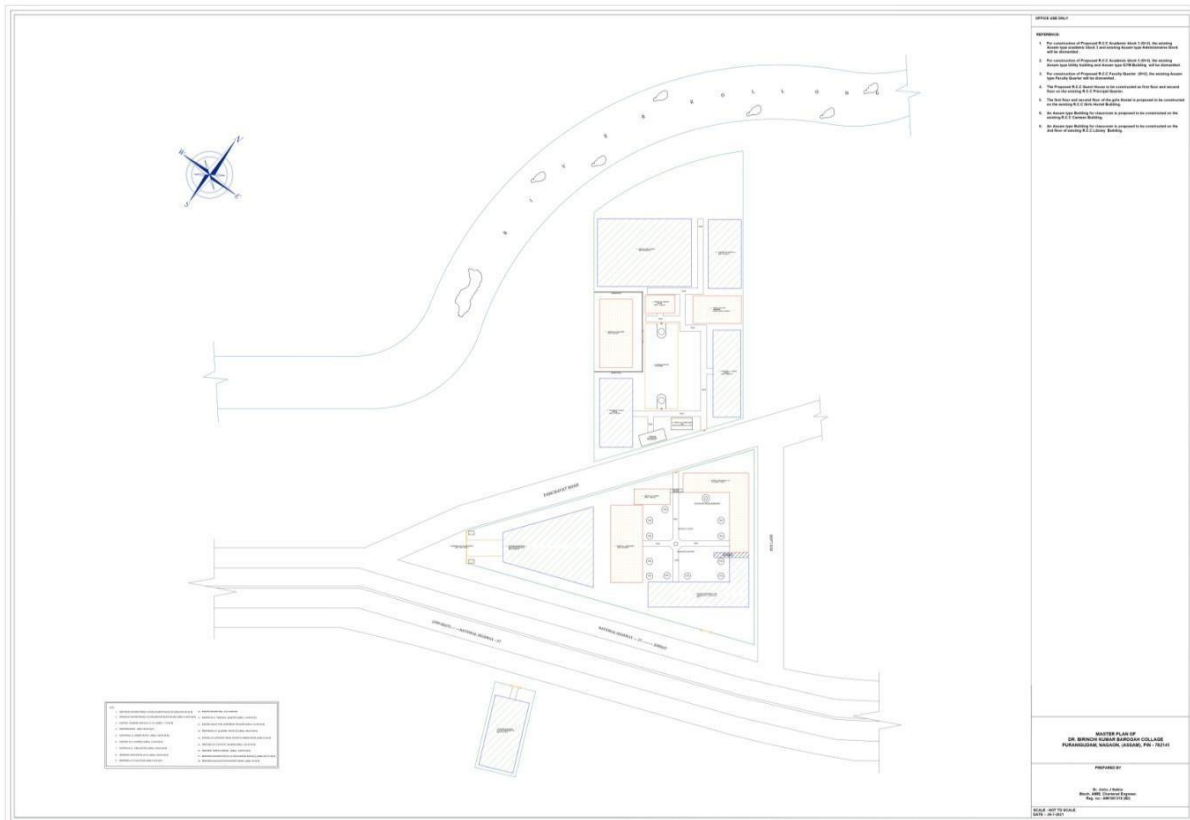
**Divisional Forest Officer
Nagaon Social Forestry Division,
Katimari**

2.



**Assistant Conservator of Forest
Nagaon Social Forestry Division
Nagaon.**

CAMPUS INFRASTRUCTURE



Map of the college: Dr. B.K.B. College



Aerial view of the college campus (Source Google Earth)

Objective of the Study

The main objective of the Green Audit is to promote the environment management and conservation in the college campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of environmental sustainability in accordance with the applicable regulations, policies and standards. The main objectives of the present study are:

- 1) To inculcate and create awareness among students and stakeholders towards the real concerns of environment and its sustainability.
- 2) To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use in the campus.
- 3) To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and possess high cost corrective measures.
- 4) To identify the current practices that can impact on the environment of the college campus.
- 5) To bring out a present status report on environmental compliance.

Methodology:

In the process of carrying out Green Audit the methodology applied included different tools such as, preparation of a format for data collection, physical inspection of the campus, observation and review of the documentation, measurements and recommendations. The area covered by the study to summarise the present status of environment management in the campus is Green Area Management.

Green Area Management

Tree diversity of Dr. B.K.B. College

The College campus is enriched with different tree species which are performing different ecological services. The various tree species of the college campus were planted during different periods with a view to implementing multiple plantation programs carried out from time to time. Those valuable tree species of the college campus have alleviated the quality of life of the entire college fraternity as well as the people living around the college campus by providing different environmental services. These include- the improved air quality, protection of soil erosion, controlling climate change and supporting wildlife. Animals of different types have been depending on these plants for their food and shelter. The leaves, fruits and flowers are being used by many animals, birds and insects for their life support. The old structure of these trees gives them an imposing quality. Those different plant species manifest different shapes, colour and texture. These perennial woody plants located in the college campus help in reducing unpleasant noise, dusty air and devastating storm. The recent study about the flora and fauna found available in the college campus exhibit the rich diversity of trees with a large variety of species. Thus, the green belt of the college has been contributing significantly in maintaining the healthy environment of the entire area. The following are the different tree species with whom we are being attached to:

Table- 1
List of Plants in the college campus

Sl. No	Local Name	Scientific Name	Density
1	Bokul Tree	Mimusopselengi	1
2	Jamun Tree	Syzygiumcumini	1
3	Bogoriplant	Zizyphus jujube	4
4	Taro/kosu Plant	Colocasiaesculenta	
5	Radhasura Plant	Caesalpiniapulcherrima	1
6	Teteli Tree	Tamarind	1
7	Guava	Psidiumguajava	6
8	Aidin Plant	Adina	
9	Neem Tree	Azadirachtaindica	1
10	Durun Plant	Leucas	
11	Dhekiya plant	Diplaziumesculentum	
12	Krishnasura Tree	Royal poinciana	1
13	Rose plant	Rosa	7
14	Erica Palm	Dypsislutescens	3
15	Lemon Tree	Citrus Limon	3
16	Haldi Plant	Curcuma longa	
17	TeakTree	Tectonagrandis	3
18	Bogori Tree	Zizyphus jujube	1
19	Noroxingho Plant	Murrayakoeniggii	3

20	Coconut Tree	Cocosnucifera	1
21	Tulsi Plant	Ocimumtenuiflorum	20
22	Bel Tree	Aeglemarmelos	1
23	Orange Tree	Citrus X sinensis	3
24	Amlokkhi Tree	Phyllanthusemblica	1
25	Betle Tree	Areca catechu	1
27	Silikha	Terminaliachebula	2
28	Koroi	Albiziaprocera	
29	Devadaru	Cedrus cedar	

Faunal Diversity

Dr. B.K.B. College situated in the Nagaon District of Assam is very rich in Bio Diversity. To conserve this bio diversity or first need is to learn about the existing diversity of the place without which a proper and feasible plan for conservation will not be possible. Also it is also important to have an understanding of the bio diversity of an area so that the local people can be aware of the richness of the bio diversity of the place they are living in and their responsibility to maintain that richness. In today's world, among the popular conservation measures which are taken to spread wildlife and environmental awareness, butterfly gardens can be placed in a significant position. To create butterfly garden we need to know which associate plants and other fauna are present in the surrounding. This study allows us to understand the faunal and floral diversity of the surrounding areas of the college premises and their inter relationship. A large faunal species have been detected in the College Campus. The list of fauna indicates that the college campus is significantly rich in faunal diversity. We have seen a significant number of bird diversity and also seen different type of bird nests at many places. We have also taken photograph of some birds. This avian diversity indicates the healthy and balanced ecosystem for breeding, nesting and feeding ground for birds. The Kolong River flows beside the college campus. River systems are the zone of Earth's highest biological diversity- and also of our most intense human activity. Rivers are important habitats for a large variety of animals and plants. Fish, amphibians, birds, insects, invertebrates, and reptiles live in rivers, or find their food there. Rivers play a vital role in connecting habitats, and their value to plants and animals extends far beyond the surface area they cover. This habitat connectivity role functions both between upstream and downstream areas, and by connecting both sides of river banks. It has also been a very vital source of livelihood to the people living nearby. Local people resort to fishing for self-consumption. It has also been used for performing various day- to-day activities as well. The list of faunal diversity has been shown in table 2.

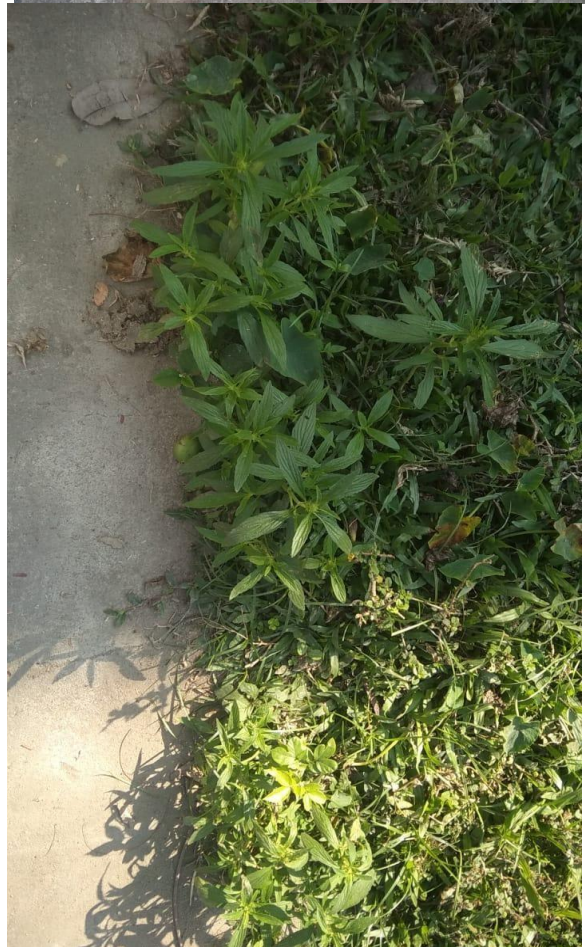
Table- 2**List of Birds and Animals around the College Campus**

Sl. No	Local Name	Scientific Name
1	Monkey	Cercopithecidae
2	Goat	Capra aegagrushircus
3	Cow	Bos Taurus
4	Hen	Gallus GallusDomesticus
5	Rooster	Gallus Gallus
4	Duck	Anatidae
5	Dog	Canis Lupus Familiaries
6	Pigeon	Columbidae
7	Sparrow	Passeridae
8	Crow	Corvus
9	Dodo	Ruphuscacullatus
10	Dove	Columbidae
11	Crane	Gruidae
12	Myna	AcridotheresTristis
13	Cuckoo Bird	Cuculidae
14	Woodpecker	Picidae
15	Goldfinch	Spinustristis
16	Kingfisher	Alcedinidae
17	Eagle	Accipitridae
18	Kite	Milvusmigrans
19	Blue Jay	Cyanocittacristata
20	Parrot	Psittaciformes
21	Snakes	Serpentes
22	Rohu fish	Labeorohita
23	Barali Fish	Wallago Attu
24	Kusiya Fish	Mastacembelusarmatus
25	Bhokuwa Fish	LabeoCatla
26	Turtle	Testudines

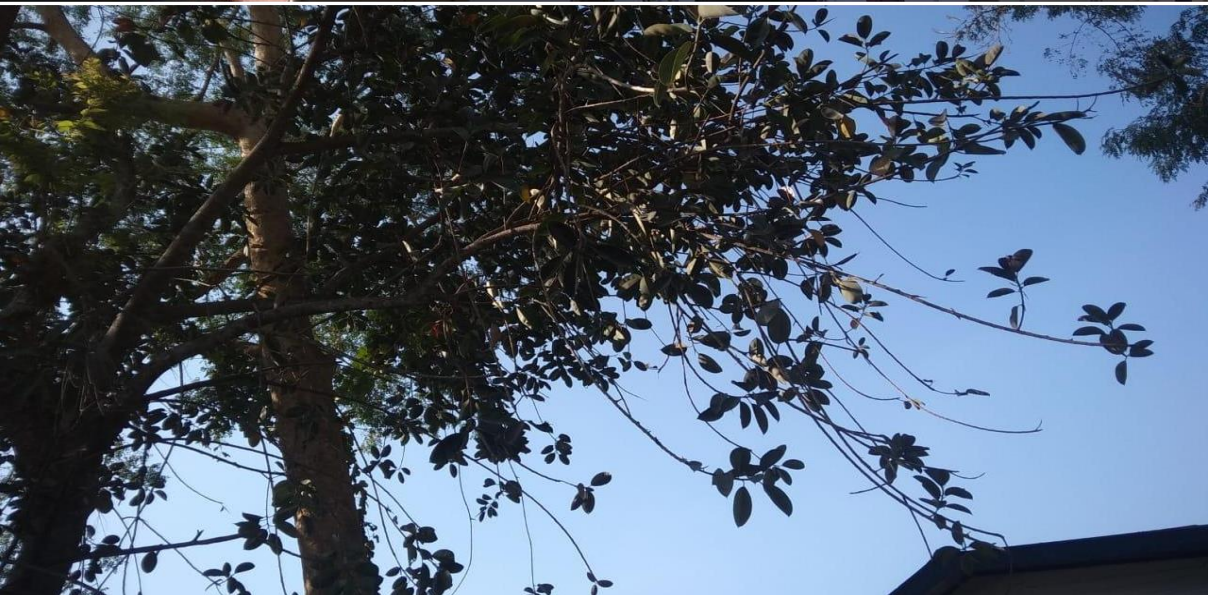
Photographs Attached:













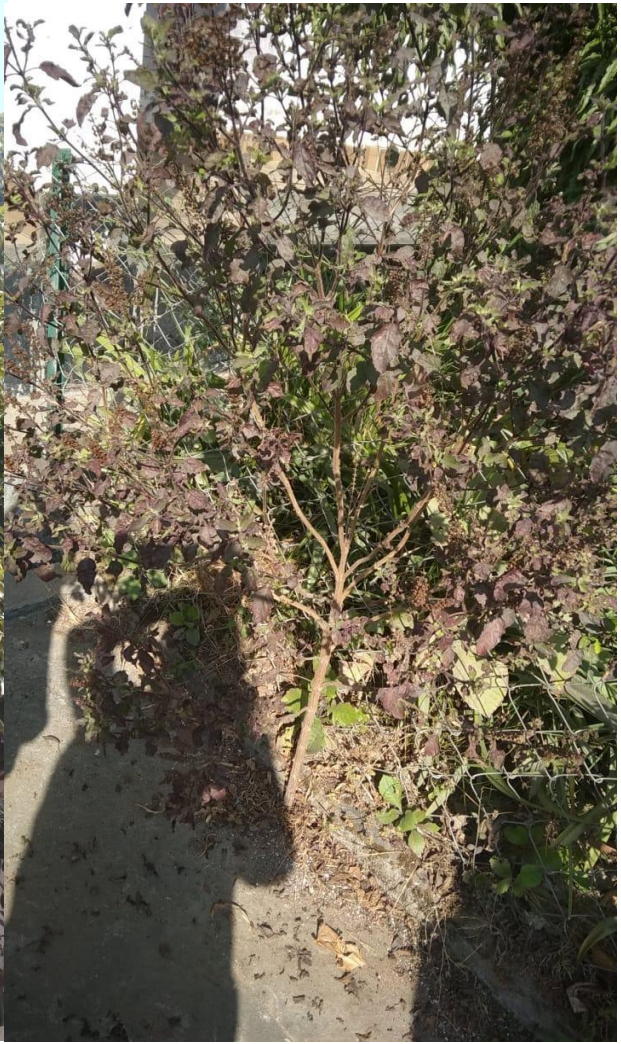




















AWARENESS PROGRAM:



Puranigudam

9Q5P+J4Q, Potani Muslim Gaon Rd, Kachari Gaon, Assam 782141, India

Kachari Gaon
Assam
India

2022-11-14(Mon) 11:24(AM)

26°C
79°F





Puranigudam, Assam, India
9Q8Q+9C6, Puranigudam, Assam 782141, India
Lat 26.3663°
Long 92.788146°
05/06/23 08:32 AM GMT +05:30

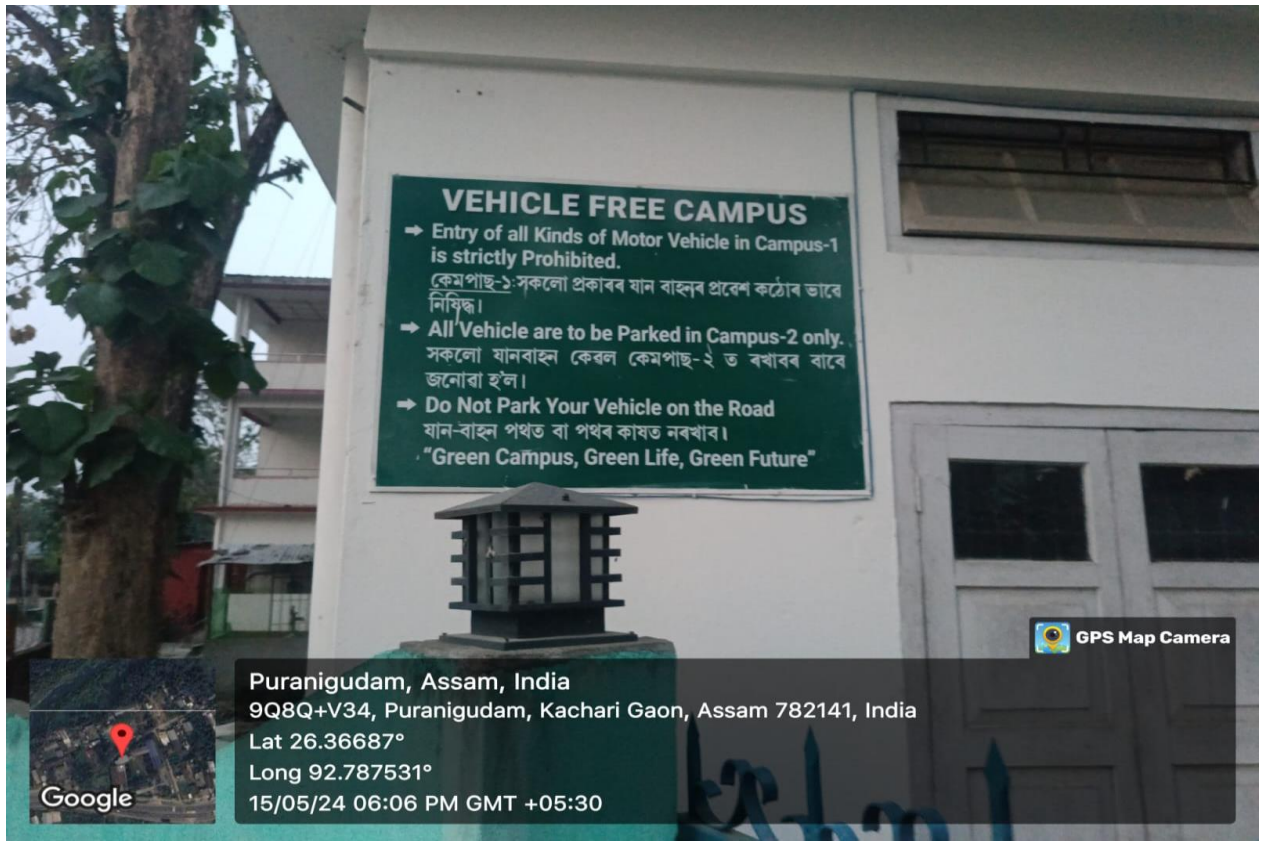


Puranigudam, Assam, India
9Q8Q+V34, Puranigudam, Assam 782141, India
Lat 26.366821°
Long 92.787411°
05/06/23 11:42 AM GMT +05:30

CLEANLINEES DRIVE



VEHICLE FREE CAMPUS



Waste Management at Dr. BKB College:

Waste is aesthetically unpleasant and can cause environmental degradation as well as health problems. Human activities generate waste and it is very essential that the wastes are collected, stored, handled and disposed of properly. Wastes are found in solid, liquid and E- waste forms. Solid wastes can be categorized into three types- biodegradable, non- biodegradable and hazardous waste. Biodegradable waste includes food wastes, canteen wastes and waste from toilets etc. Non-biodegradable waste includes plastics, tins, metal, glass, bottle etc. And hazardous waste includes chemicals, acids, petrol, diesel etc., which are likely to pose a threat to the health and environment. Unscientific management of these wastes through dumping in pits or burning them may cause the harmful discharge of contaminants into soil and water supplies and produce greenhouse gases contributing to global climate change. So, special attention should be taken for scientific management and handling of wastes generated in the college campus. Thus the minimization of waste is essential for sustainable environment of the college campus.

Sources of Waste Generation and status of wastes in the College Campus:

Each and every academic department of the college along with the administrative offices, hostel, canteen, laboratories and library create different categories of waste such as solid waste, liquid waste, e-waste and hazardous waste in the college campus. To collect all these waste materials, 13 big dustbins are placed at different corners of the campus-1. Along with it, most of the departments keep their separate small dustbins inside the department and together all the wastes collected by the housekeeping/sweeper staff of the college on regular basis. On average, various stakeholders generate 48 kg of biodegradable wastes and 24 kg of non-biodegradable wastes per week and 60 kg of E-wastes per year. All the wastes are then dumped near the swamp behind the library and are burnt altogether. But there is no provision of dustbins for the wastes generated in Campus-2 of the college, and so the wastes are collected by the housekeeping/sweeper staff of the college and sometimes by the NCC cadres as well as the NSS volunteers. The wastes including plant litters are regularly collected and are burnt off at different spots. The E-wastes are put to optimal use and those which cannot be used or recycled are disposed off through vendors. A sanitary napkin incinerator machine is installed to dispose off the used sanitary napkin/pad. Proper drainage systems are laid out to collect the liquid waste from all sources and the outlet is properly connected to Kolong River from where it is discharged.

Survey Checklist for Waste Management System

1	Total number of students		
2	Total number of teaching staff		
3	Total number of non-teaching staff		
4	Which of the following are available in the college campus? Give the number.		
	a	Total number of garden	
	b	Number of garbage dumb	
	c	Number of big dust bin	
	d	Number of small dust bin	
	e	Number of laboratory	
	f	Number of canteen (kitchen)	
	g	Number of hostel (kitchen)	
	h	Number of staff quarter (kitchen)	
	i	Number of toilet	

5	Does the incumbent of the college generate any waste? If so what are these? Mention number and weight.	
	a	Solid waste (paper, plastic, metal, glass)
	b	Liquid waste
	c	E-waste
	d	Hazardous waste
	e	Unused equipment
	f	Medical waste
	g	Napkin
h	Any others	
6	Is there any waste management mechanism in the college?	
7	What is the approximate amount of waste generated per day/ per month?	
	a	Biodegradable wastes
	b	Non-biodegradable waste
c	E-wastes	
8	What are the methods used to dispose the wastes generated in the college?	
	a	Composting
	b	Recycling
	c	Reusing
d	Any others	
9	Does the college authority use the recycled paper in the college?	
10	Can you achieve zero garbage in your college? If yes, how?	

Table-3

Table indicates the data/information gathered from various sources about waste generation and management

Total Stakeholders : 1199	a. Students: 1147 b. Teaching staff: 35 c. Non-teaching staff: 13 d. Canteen staff: 04
Number of canteen	01
Number of kitchen	03
Number of garden	07
Number of big dust bin	13
Number of small dustbin	18
Number of laboratory	03
Number of toilets	08
Bio-degradable waste (food wastes, canteen waste, toilet waste etc.)	Waste bins are placed at several points of the college to collect wastes by the cleaners and These are dumped inside the college campus.
Non-bio-degradable waste (paper, paper-plate, paper cup, plastic, glass, tin, metal etc.)	Big dustbins are placed in several points in the college campus and small dust bins are used by the stakeholders of different departments and administrative offices to

	collect the non-bio-degradable wastes for disposal by burning.
E-wastes (computers, electrical as well as electronic parts and ware)	Collected for storage in a store room and disposed by auction.
Unused equipments and damaged furniture	Disposed through vendor.

Bio-degradable waste (canteen, hostel, quarter and departments)	8 kg/day
Non-bio-degradable waste (canteen, hostel, quarter and departments)	4 kg/day
E-waste	5 kg/month

Few photographs of dust bin and waste management are attached:









Water Management at Dr. B.K.B. College:

Water body and its proper management is the primary perspective in relation to maintain a well structured hygienic atmosphere in the college premises. The administration of Dr. B.K.B. College has maintained the basic requirements of water management and provision of water facilities to all the students enrolled in all the semesters in every year. Starting from pure drinking water till usage of water in all the areas, the college administration has taken up adequate steps. The basic source of water used in the college premises is the groundwater that is conserved in water tanks and the bore well, rainwater harvested in concrete tanks. The conserved water stored in all the available store-houses is widely used in the washrooms, in the water purifiers, in the flower gardens, in boys' and girls' common rooms, in the canteen, in the girls hostel etc. etc. Regarding drinking water, timely checking up of all the filters is arranged with adequate systems. Proper outlet in specific places and appropriate drainage are also systematized for releasing excess water (used water too) from the water tanks and taps. As a whole, the college has deliberately maintained a well-framed water management system in the premises.

Rainwater Harvesting

Rainwater harvesting is the collection of rainwater from a surface that allows for the rainwater to be stored and used at a later time. Rainwater can be harvested and stored for the use of landscape irrigation, potable and non-potable indoor / campus use, and storm water management. Harvested rainwater can be particularly useful when no other source of water supply is available, or if the available supply is inadequate or of poor quality. In the college premises of Dr. B.K.B. College, rainwater harvesting is started by fixing adequate pipes in the edges of the roof tins in one part of the college building. The rainwater collected through this process is preserved in concrete wells / tanks having the capacity of approximately 2000 liters.

Table: 4

List of items and their accounts where water is utilized:

Sl No	Identity of item (Capacity/Size)	Total No.
1	Water tanks	08
2	Water pumps	05
3	Water purifiers	08
4	Water taps	35
5	Electronic motors	03
6	Washrooms	08



Water Testing Report:

GOVT OF ASSAM
WATER ANALYSIS REPORT

BLOCK BRAHAMPUR GP PURANIGUDAM
Name Of Division--Nagaon District-- Nagaon

Sl No	Pinpoint	Source	Vill/Habitation	WATER QUALITY												
				Turbidity (NTU)	p ^H	Iron mg/lit.	Nitrate mg/lit	Fluoride mg/lit	Hardness mg/l	Chloride mg/lit	Arsenic mg/lit.	Total Dissolved Solids mg/lit.	Alkalinity mg/lit.	Manganese mg/lit.	Bacteria	Remarks
1	Hostel Dr BKB college	B/well	Puranigudam	1.2	7.1	0.32	0.42	0.35	224	100	0.01	211	86	0.18	Negative	Source is safe
2	Canteen Dr BKB college	B/well	Puranigudam	1.1	7.1	0.27	0.63	0.50	222	100	0.01	210	84	0.18	Negative	Source is safe
3	Drinking water Dr BKB college	B/well	Puranigudam	1.1	7.1	0.08	0.53	0.17	225	100	0.01	213	83	0.18	Negative	Source is safe
DESIRABLE LIMIT / MAXIMUM / PERMISSIBLE LIMIT				1....5	6.5...8.5	0.3...1.0	45	1....1.5	300...600	250...1000	0.05	500...2000	200...600	0.1...0.3	xxxxxxxxxxxxxxxxxxxx	

Test Performed By *[Signature]*
DLL, PHE, Nagaon 29/06/22

[Signature]
Asstt. Executive Engineer(PHE),
Nagaon Sub Division, Nagaon

The water testing report submitted by PHE, Nagaon sub-Division also shows that the source of drinking water is SAFE.

PHOTO GALLERY OF WATER MANAGEMENT:



Pic.1: Water tanks used for storing groundwater for using in different purposes.

Conclusions and Recommendations:

Bio-diversity

For balanced bio-diversity and ecosystem following recommendations are made-

- More plantation needs to be done in and around the campus.
- A garden of medicinal plants, a garden of indigenous flowers should be initiated.
- Trees should be planted in the campus and also near the roads around the campus to minimise air pollution.
- Boundary walls need to be constructed along the roadside.

Waste Management

For well waste management following suggestions are given-

- Adequate number of big dust bin as well as small dust bin should be set up in the campus-2 of the college.
- A concrete waste disposal pit should be made as soon as possible for disposing the non-degradable waste of the college campus.
- A vermicompost pit should be made in the college campus for composting the bio-degradable waste of the college.
- Separate waste disposal dust bin should be set up in the various points of the college campus.
- MoU should be done with the local waste managing committees and/or with the municipal board of the nearby town.
- A Green Audit Cell should be formed.