

GREEN AUDIT REPORT

2021-2022



Submitted To

The Principal
Ghana Kanta Borah College
Pin: 785682

Submitted By



JKM Consultancy Service
Solution For Green Audit

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GREEN AUDIT CERTIFICATE

This is to certify that a Green Audit for Ghana Kanta Borah College, Jorhat , Assam has been conducted from March -21 to February -22 to assess Environment cost and Environment Impact Assessment and Carbon credit with a view to take sustainable steps to reduce the carbon footprint left by the college and to make environment friendly model of administration.

Dr. Dulen Saikia
Chairperson

Dr. Dulen Saikia
22/01/2023
Dr. Dulen Saikia
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INTRODUCTION:

Green audit is also widely known as Environmental Audit. Green Audit can be better understood as: Compliance of Environmental Laws, Audit of Environment Cost and Environment Impact Assessment, and Carbon Credit. We believe that saving ‘Mother Earth’ is an integral part of education and that the carbon footprint left by the college is to be reduced by sustainable steps and an environment friendly model of administration. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. Institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. 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.

In recent time, the Green audit of an institution has been becoming important for self assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. Many institutions undertake lots of good measures to resolve these problems but are not documented due to lack of green documentation awareness. All this non-scholastic efforts of the administrations play an important role in ensuring the green quotient of the campus is intact. 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.

OBJECTIVES:

The main objectives of carrying out Green Audit are:

- To map the Geographical Location of the college.
- To document the floral and faunal diversity of the college.
- To record the meteorological parameter of Tamulichiga region where college is situated.
- To document the ambient environmental condition of weather, air, and noise of the college
- To document the waste disposal system.

METHODOLOGY:

The purpose of the green audit of Ghana Kanta Borah College, Tamulichiga, Jorhat is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes:

- Collection of data.
- Physical inspection of the campus.
- Observation and review of the documentation and data analysis.

ABOUT THE COLLEGE:

With the objective of carrying the beacon of higher education and shaping the career as well as character of the aspirant youths of the comparatively secluded area between the districts of Sivasagar and Jorhat, the **Ghana Kanta Borah College, Tamulichiga** (popularly known as **GKB College**) was established. Right from the day of its inception, the college has stood to this objective. It has since then continuously imparted quality higher education, making students show excellent academic performance and thereby creating a niche in the Dibrugarh University success matrix almost every year. The college has been able to produce students who have achieved significant positions amongst the top twenty students of a department in Dibrugarh University result sheet. It has also carried forward its legacy of shaping the character of the youths of the region as well as making significant contribution in overall upliftment of the social fabric and aura of the surrounding society. A large number of students of the college have not only achieved academic excellence but also have established themselves as good citizens of the society, making the college proud.

The establishment and present stature of the college in the comparatively backward and economically poor region has been possible due to the continuous goodwill and support of support of certain distinguished personalities and the general public of the area, to whom the college is always indebted. But the college has stood to the aspiration of these benefactors and has amply returned the favors in term of its excellent and sincere service to the community.

The credit to this must be given to the administrative expertise of the college authority as well as the experience and diligence of the sensible teaching and non-teaching staff. The young and thriving faculty members of the college, who carry all requisite educational qualifications, have continuously kept themselves updated in terms of academic pursuance.

The college has, nevertheless, certain shortcomings in the matters of infrastructure. But that is aptly compensated by the good homely environment of the college and sincerity and commitment of the entire college family. The limited number of students of the college has only helped it to maintain discipline,

decorum and a healthy teacher-student relationship, which is one of the assets of the college.

The college has successfully completed 40 years of its glorious presence. It is affiliated to the Dibrugarh University and is awarded permanent affiliation in 2016 and registered under section 2(f) of UGC Act, 1956.

VISION

Tomosho Maa Jyotirgamaya - dispelling the darkness of ignorance, to lead the society towards light of knowledge by holding the beacon of education high is the vision of the college. To become a reliable centre of higher education and act as a torchbearer for overall and harmonious upliftment of society. To cater to, nourish and cultivate the academic, intellectual and entrepreneurial aspiration of the locality for all round social progress

MISSION

- To impart quality higher education in the comparatively remote, economically disadvantaged area lying at the juncture of Jorhat and Sivasagar districts.
- To shape the career and character of the aspirant youths therein.
- To work towards mental, physical, emotional and personality development of the students.
- To inculcate and cultivate moral and spiritual values, traditional ethics, intellectual integrity, leadership quality, environmental awareness, reading environment, tolerance, nationalism in students.
- To sensitize students on gender issues, environmental hazards, social evils, unemployment challenges, moral degradation etc.
- To adapt students to the ever changing world, at the same time to retain Indian traditions, Indian value system, Assamese culture and tradition.
- To motivate students to mould themselves as human resources and responsible citizens so that they can contribute to social harmony and overall development of society with collective effort.
- To become a nurturing ground for the future generations to evolve out of decades of social, political, economic upheaval of the region.

OBSERVATIONS:

TREE DIVERSITY OF GKB COLLEGE, TAMULICHIGA, JORHAT:

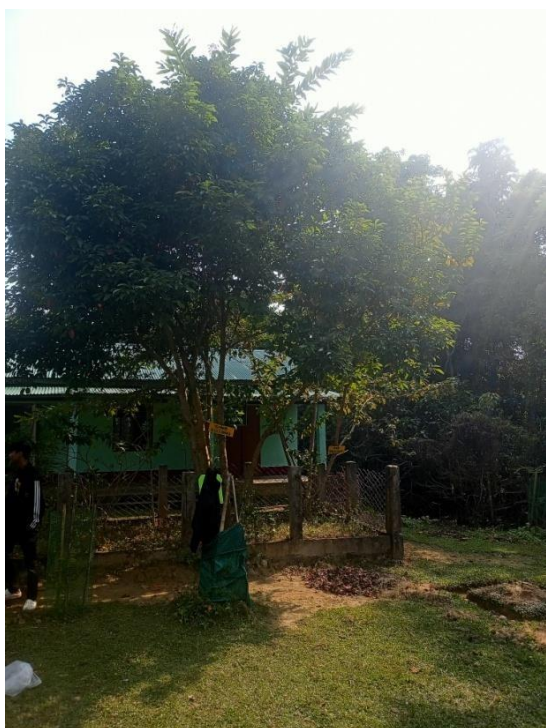
GKB College, Tamulichiga, Jorhat is located by the side of the Hanchara-Jelengitup Lalit Ch. Rajkhowa Path at the waste land of the river Jhanji which forms the buffer zone between the districts, Jorhat and Sivasagar.

The college campus is surrounded by lush green paddy fields. The transportation system leading to the college is very good . It is worth-mentioning that the college is fully equipped with well-furnished buildings and a big playground with necessary civic amenities. The college possesses a plantation area which has a great diversity of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmes organized by the college authority and have become an integral part of the college. The trees of the college are prominent features that are planted to maintain the greenery and aesthetic values, store carbon and stabilize the soil. Many species of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. Even individual trees vary their appearance throughout the course of the year as the seasons change. They also remind us the glorious history of our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cut down dust and storms. Thus, the college has been playing a significant role in maintaining the environment of the entire surrounding areas. The following are the tree species with whom we are being attached--

List of the Plants

SI No	Local Name	Scientific Name	Total No
1	Bel	<i>Aegel marmelos</i>	01
2	Radhachura	<i>Cassia javanica</i>	01
3	Kodom	<i>Neolamarckia cadamba</i>	01
4	Bogi Jamu	<i>Syzygium jambos</i>	01
5	Indian Olive	<i>Elaeocarpus serratus</i>	01
6	Papaya	<i>Carica papaya</i>	01
7	Bokul	<i>Mimusops elengi</i>	02
8	Bamboo	<i>Bambusa sp</i>	100
9	Nahor	<i>Mesua ferrea</i>	01
10	Guava	<i>Psidium guajava</i>	02
11	Gooseberry	<i>Phyllanthus emblica</i>	02
12	Poramllokhi(Holfoli)	<i>Phyllanthus acidus</i>	02
13	Krishna Chura	<i>Delonix regia</i>	01
14	Coconut	<i>Cocos nucifera</i>	01
15	Rangol(Ashok ful)	<i>Saraca ashoka</i>	01
16	Devdaru	<i>Polyanthia longifolia</i>	03
17	Pine	<i>Pinus sp.</i>	02
18	Joba	<i>Hibiscus Rosa sinensis</i>	01

PHOTO GALLERY



Elaeocarpus serratus



Carica papaya



Mesua ferrea



Bambusa sp.



Delonix regia



Psidium guajava



Pinus sp.



Cocos nucifera

FAUNAL DIVERSITY IN GKB COLLEGE, TAMULICHIGA, JORHAT:

The GKB College, Tamulichiga, Jorhat is situated by the side of the Hanchara-Jelengitup Lalit Ch. Rajkhowa Path at the waste land of the river Jhanji which forms the buffer zone between the districts, Jorhat and Sivasagar. The wet season in this area is hot, oppressive, and mostly cloudy, while the dry season is warm and clear. Throughout the year, the temperature typically ranges from 51°F to 89°F, with temperatures rarely falling below 47°F or rising above 95°F. The climatic conditions in the Jorhat district as a whole, and particularly in, GKB College are ideal for a diverse range of flora and fauna to thrive and contribute to the rich biodiversity of the district.

The following faunal diversity has been studied and documented on the Cinnamara College, Jorhatcampus:

Table: Common and Scientific names of birds and animals

S.No	Common Name	Scientific Name
1.	Common Myna	<i>Acridotheres tristis</i>
2.	White breasted waterhen	<i>Amaurornis phoenicurus</i>
3.	House Sparrow	<i>Passer domesticus</i>
4.	Crow	<i>Corvus sp.</i>
5.	Cuckoo	<i>Cuculidae</i>
6.	Snake	<i>Naja naja</i>
7.	Cattle egret	<i>Bubulcus ibis</i>
8.	Butter Fly	Danaus Genutia
9.	Common pigeon	<i>Columba livia</i>
10.	Garden tiger moth	<i>Arctia caja</i>
11	Bat	<i>Chiroptera</i>
12	Indian owl	<i>Bubo benghalensis</i>
13	Leech	<i>Hirudinea</i>
14	Earthworm	<i>Eisenia fetida</i>
15	Goat	<i>Capra aegagrus hircus</i>
16	Ceylon hawk cuckoo	<i>Hierococcyx varius.</i>
17	Cow	<i>Bos Taurus</i>

NOISE LEVEL IN THE SURROUNDING OF GKB COLLEGE, TAMULICHIGA JORHAT:

Noise measurement, also known as sound level monitoring, is a process that determines the magnitude of noise in a specific area, such as an industrial or residential area. As noise pollution has increased exponentially in recent years, this process is part of environmental monitoring and testing. Sound or noise has two important properties:

- **Loudness** : The intensity of a person's perception of sound is defined as loudness. Decibels are used to quantify it. A whisper is about 20 dB, a library is about 30 dB, normal conversation is about 35-60 dB, heavy street traffic is about 60-80 dB, boiler factories are about 120 dB, jet planes during take-off are about 150 dB, and rocket engines are about 180 dB. The loudest sound a person can tolerate without feeling ill is around 80 decibels (dB). Sounds above 80 decibels (dB) can be considered Pollutants because they harm the hearing system. The WHO has established 45 decibels as the safe noise level for cities. Noise levels of up to 65 dB are considered tolerable by international standards. Sones are another way to express loudness. One sone is equal to 40 decibels of sound pressure at 1000 hertz. The number of vibrations per second is defined as frequency. Hertz is the abbreviation for it (Hz).
- **Frequency** : The frequency of sound is defined as the number of pressure variations per second that occur when sound travels through air and is measured in Hertz (Hz). The higher the frequency, the higher pitched the sound is perceived to be.

MATERIALS, STUDY AREA & METHODS

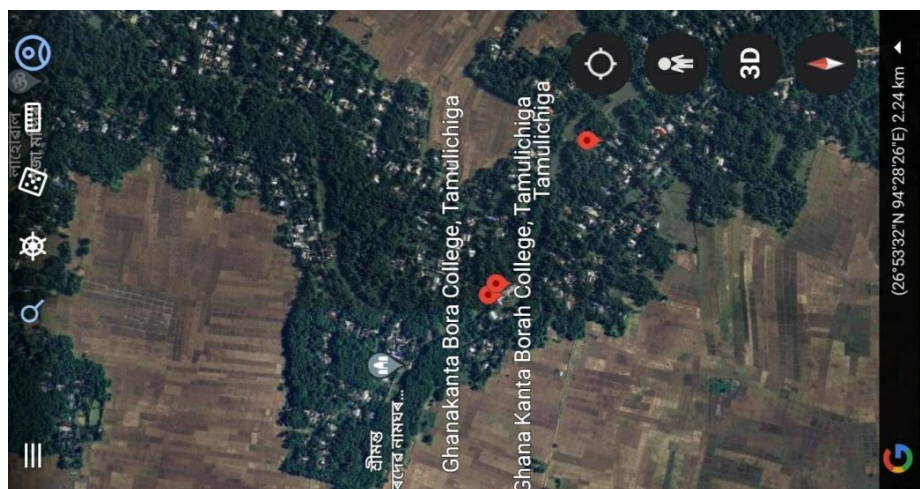
Noise level meter or noise measuring app(Sound meter), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibels.



Figure: Noise Measurement by sound meter app

DESCRIPTION OF THE COLLEGE SITE:

The GKB College is located by the side of the Hanchara-Jelengitup,Lalit Ch.Rajkhowa Path at the waste of the river Jhanji which forms the buffer zone between the Districts, Jorhat and Sivasagar.



MEASUREMENT PROCEDURE:

The noise level was measured at various important locations of the college area..The measurements were taken for 60 seconds at each location during the day (9 a.m.-3 p.m.) and are recorded. Screen shots of noise measurements were taken on the app immediately at the 60th second of each measurement..

RESULTS

The results of the experiments at different places have been tabulated in the following table

Table 1: Measurements of Noise in and around GKB College, Tamulichiga, Jorhat

<i>PLACE</i>	<i>MEASUREMENT (Duration in Sec.)</i>	<i>MINIMUM (dBA)</i>	<i>Maximum (dBA)</i>	<i>AVERAGE (dBA)</i>
College front gate	60	65	87	47
IQAC room	60	37	88	57
Ground floor(site 1)	60	37	66	63
Ground floor(site 2)	60	47	55	60
Ground floor(site3)	60	35	78	56
Principal room	60	37	88	58
Auditorium	60	40	73	59
Library	60	45	56	51

Source: The measurements were taken with the help of sound meter app. The measurements of noise have been recorded in and outside of college area:

Inside the campus: 35-88

Outside the campus: 47-87

WEATHER DATA MONTH WISE JORHAT (Source: Google)

Location: 26.53'32''° N, 94.28'26''° E

The climate in Jorhat is warm and temperate. Jorhat is in the northern hemisphere. Here, the average temperature is about 23.7 °C (74.7 °F) and about 2699 mm i.e 106.3 inch of precipitation falls annually. The month with the highest relative humidity is July (85.22 %). The month with the lowest relative humidity is March (69.03 %).

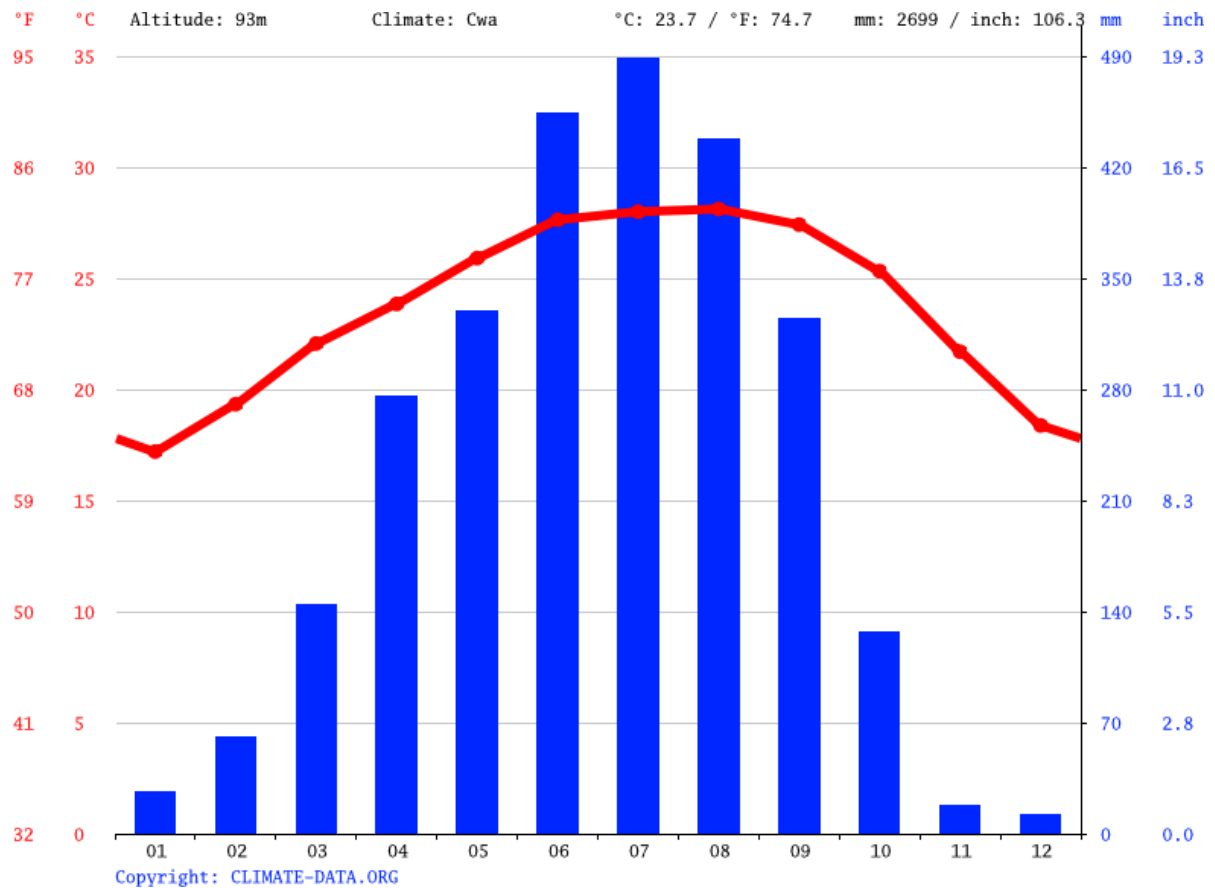
The month of July has the highest number of rainy days i.e 28.20 days.. The month with the lowest number of rainy days is December (2.17 days).

Summer starts here at the end of June and ends in September. There are the months of summer: June, July, August, September. The driest month is December, with 12 mm of rain and most of the precipitation falls in July, with 489 mm of rain.

Parameters	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Avg. Temperature °C (°F)	17.2° C 63°F	19.3° C 66.8°F	22.1° C 71.7°F	23.8° C 74.9°F	25.9° C 78.6°F	27.6° C 81.7°F	28°C 82.4° F	28.1° C 82.6° F	27.4° °C 81.3° °F	25.3° C 77.6° F	21.7° C 71.1°F	18.4° C 65.1° F
Min. Temperature °C (°F)	12.3°C 54.1°F	14.4°C 57.9°F	17.5°C 63.5°F	20.2°C 68.4°F	22.8° C 73°F	25.1° C 77.2° F	25.6°C 78.1°F	25.6° C 78°F	24.7° °C 76.5° °F	21.9° C 71.5° F	17.5°C 63.4°F	13.7° C 56.7° F
Max Temperature °C (°F)	22.3° C 72.1° F	24.3° C 75.7° F	26.7° C 80.1° F	27.7°C 81.9°F	29.4° C 84.9° F	30.8° C 87.4° F	30.9° C 87.6° F	31.1° C 88° F	30.6° °C 87.1° °F	28.9° C 84° F	26.1°C 79°F	23.3° C 73.9° F
Precipitation /Rainfall Mm(in)	26 (1)	61 (2.4)	144 (5.7)	276 (10.9)	329 (13)	454 (17.9)	489 (19.3)	438 (17.2)	32 5 (12.8)	127 (5)	18 (0.7)	12 (0.5)
Humidity (%)	75%	71%	69.03%	78%	82%	85%	85.22%	85%	85%	82%	78%	78%
Rainy days (d)	4	6	10	14	17	20	21	21	18	9	2	2.17
Avg. Sun Hours	7.6	8.4	9.0	8.1	8.8	9.3	9.4	9.0	8.9	8.6	8.1	7.4

Table: Weather report of Jorhat District for the period of 2021-22

CLIMATE GRAPH MONTH WISE



RAIN WATER HARVESTING IN THE COLLEGE CAMPUS:

Rain water harvesting is an important environment friendly approach. It is a Green practice of catching and holding rainwater when it falls. We can either store it in tanks for further use or we can use it to recharge groundwater depending upon the situation. The GKB College has undertaken an initiative to store the rainwater and use it in various activities to ensure sustainable use of water resources.



