

# GREEN AUDIT REPORT

## 2021-2022



**Submitted To**  
**The Principal**  
**Nandalal Borgohain City College**  
**Dibrugarh**  
**Pin: 786003**

**Submitted By**



**JKM Consultancy Service**  
**Solution For Green Audit**

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## ACKNOWLEDGEMENT

At first, we would like to thank Nandalal Borgohain City College, Dibrugarh, management for their cooperation that was extended to us during the entire process.

Our special thanks goes to Dr. Sanjeevananda Borgohain, Principal, Nandalal Borgohain City College, Dibrugarh for giving us necessary inputs to carry out this vital exercise of Green Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

### GREEN AUDIT ASSESMENT TEAM

#### (INTERNAL)

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**Chairperson :** Dr. Dulen Saikia, Principal, JKM, MSc, M.Phill, PhD

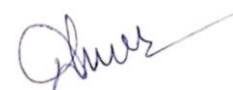
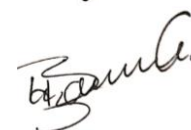

**Coordinators:** Mrs. Pinaki Hazarika, HOD, Department of Botany, JKM

#### Members:

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## GREEN AUDIT CERTIFICATE

This is to certify that a Green Audit for Nandalal Borgohain City College, Dibrugarh , 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  
Chairperson, G-Audit  
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**JKM Consultancy Service**

  
Mrs. Pinaki Hazarika  
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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 the college as well as Dibrugarh region where the college is situated.
- To document the waste disposal system.

## **METHODOLOGY:**

The purpose of the green audit of Nandalal Borgohain City College, Dibrugarh, 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:**

Nandalal Borgohain City College, Dibrugarh has already stepped into the glorious silver jubilee year, which was established in 1992 as an outcome of the energetic, selfless and enthusiastic effort of the renowned educationist Late Nandalal Borgohain. The college is a co-educational institution of Higher Education situated in the South-Western part of Dibrugarh town, Dibrugarh, Assam. The College is affiliated to the Dibrugarh University since 1997. The college was awarded “B” Grade by NAAC with the Institutional score 73.00. It has been entered in the list of National Institution Ranking Framework (NIRF). The college has a sprawling campus, which covers about 1.72 acres of land. Besides the well-furnished classrooms, office buildings, Library, an Auditorium two Conference Halls, Boy's and Girl's Common room, Canteen and a two storied girls' Hostel are other worth mentioning infrastructure facilities. At present the college has well qualified, energetic and well experienced faculties along with administrative, technical and supporting staff and energetic talented student strength.

## **MOTTO OF THE COLLEGE:**

*“Lead all ahead towards excellence”*

## **VISION**

To enhance a quality academic environment by developing innovative, skill-based teaching, affordable learning, to enrich the social responsibilities and values.

## **MISSION**

- To offer Educational Opportunities for all.
- To create a platform for all-round development of the students as well as the teachers.
- To promote Higher Educational Opportunities.
- To offer Technical and Vocational Courses.
- To bring education to the doorsteps of the learners of all sections of the society.
- To develop social values that help for becoming responsible citizenship.
- To maintain a gender friendly environment.

## **OBSERVATIONS:**

### **TREE DIVERSITY OF NLB CITY COLLEGE,DIBRUGARH:**

Nandalal Borgohain City College, Dibrugarh is located in the South-Western part of Dibrugarh Town, Dibrugarh, Assam.

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	Mamoi Tamul	<i>Chrysalidocarpus lutescens</i>	02
4	Bogi Jamu	<i>Syzygium jambos</i>	01
5	Bottle brush	<i>Callistemon citrinus</i>	02
6	Papaya	<i>Carica papaya</i>	05
7	Bokul	<i>Mimusops elengi</i>	03
8	Sewali	<i>Nyctanthes arbor-tritis</i>	08
9	Nahor	<i>Mesua ferrea</i>	10
10	Guava	<i>Psidium guajava</i>	03
11	Gooseberry	<i>Phyllanthus emblica</i>	03
12	Pomegranate	<i>Punica granatum</i>	02
13	Krishna Chura	<i>Delonix regia</i>	05
14	Bogori	<i>Zizyphus jujuba</i>	05
15	Rangol(Ashok ful)	<i>Saraca ashoka</i>	02
16	Devdaru	<i>Polyanthia longifolia</i>	10
17	Pine	<i>Pinus sp.</i>	20
18	Joba	<i>Hibiscus Rosa sinensis</i>	03
19	Jamuk	<i>Syzygium cumini</i>	02
20	Rose	<i>Rosa sp.</i>	08
21	Aparajita	<i>Clitoria ternatea</i>	02
22	Nuni	<i>Morus alba</i>	02
23	Tulsi	<i>Ocimum</i>	08
24	Hilikha	<i>Terminalia chebula</i>	05
25	Hukloti	<i>Pogostemon patchoulis</i>	03
26	Narahingho( Curry Leaves)	<i>Murraya koenigii</i>	05
27	Masundari	<i>Houttuynia cordata</i>	100+
28	Bos gos	<i>Acorus calamus</i>	02
29	Titaphul	<i>Phlogacanthus thyrsiformis</i>	02
30	Jomlakhuti	<i>Cheilocostus speciosus</i>	02
31	Dupor tenga	<i>Bryophyllum sp</i>	01
32	Neem	<i>Azadirachta indica</i>	02
33	Vedailota	<i>Padaeria foetida</i>	01
34	Nephaphu	<i>Cleodendrum colebrookianum</i>	03
35	Tamul	<i>Areca catechu</i>	01
36	Kordoi	<i>Averrhoa carambola</i>	01
37	Nashpati	<i>Pyrus sp</i>	01
38	Mango	<i>Mangifera indica</i>	03
39	Kajinemu	<i>Citrus jambhiri</i>	04
40	Gulnemu	<i>Citrus aurantifolia</i>	02

## List of the Plants

SI No	Local Name	Scientific Name	Total No
41	Sajina	<i>Moringa oleifera</i>	01
42	Amora	<i>Spondius pinnata</i>	01
43	Banana	<i>Musa sp</i>	10
44	Jolokia	<i>Capsicum sp.</i>	10
45	Brinjal	<i>Solanum melongena</i>	10
46	Pumpkin	<i>Cucurbita pepo</i>	02
47	Nayantora	<i>Catharanthus roseus</i>	15
48	Bougainvillea	<i>Bougainvillea</i>	05
49	Tomato	<i>Lycopersicum esculentum</i>	10
50	Bhat Kerela	<i>Momordica dioica</i>	03
51	Areca palm	<i>Dypsis lutescens</i>	20

## PHOTO GALLERY



*Carica papaya*



*Musa sp.*



*Areca catechu*



*Catharanthus roseus*



*Murraya koenigii*



*Houttuynia cordata*



*Lycopersicum esculentum*



*Pinus sp.*





*Rosa sp.*



*Phlogacanthus thyriformis*



*Punica granatum*



*Saraca ashoka*

## **FAUNAL DIVERSITY IN NANDALAL BORGOHAIN CITY COLLEGE, DIBRUGARH**

The NLB College, Dibrugarh is located in the South-Western part of Dibrugarh Town, Dibrugarh, Assam. 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 Dibrugarh district as a whole, and particularly in, NLB City 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 NLB City College, Dibrugarh campus:

**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 NANDALAL BORGOHAIN CITY COLLEGE, DIBRUGARH**

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

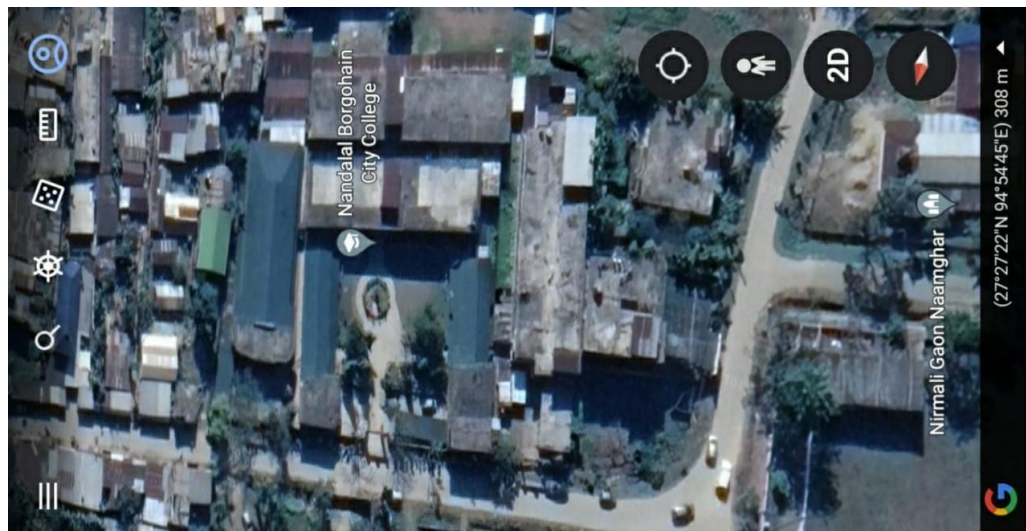
Noise level meter or noise measuring app ( Sound meter ), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibels



Figure: Noise Measurement by sound meter app

## DESCRIPTION OF THE COLLEGE SITE:

The NLB City College, Dibrugarh is located in the South-Western part of Dibrugarh Town, Dibrugarh, Assam.



## 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 NLB City College, Dibrugarh

<i>PLACE</i>	<i>MEASUREMENT (Duration in Sec.)</i>	<i>MINIMUM (dBA)</i>	<i>Maximum (dBA)</i>	<i>AVERAGE (dBA)</i>
Library	60	43	82	60
ICT Class room	60	42	86	61
Conference room	60	42	86	62
Auditorium	60	42	89	65
Classroom	60	42	89	65
Principal room	60	39	89	66
College gate	60	43	92	73

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: 39-89

Outside the campus: 43-92

## WEATHER DATA MONTH WISE DIBRUGARH (Source: Google)

Location: 27.27'22''° N, 94.54'45''° E

The climate in Dibrugarh is warm and temperate. Dibrugarh is in the northern hemisphere. The variation in the precipitation between the driest and wettest months is 470 mm | 19 inch. The variation in temperatures throughout the year is 10.9 °C | 19.7 °F.

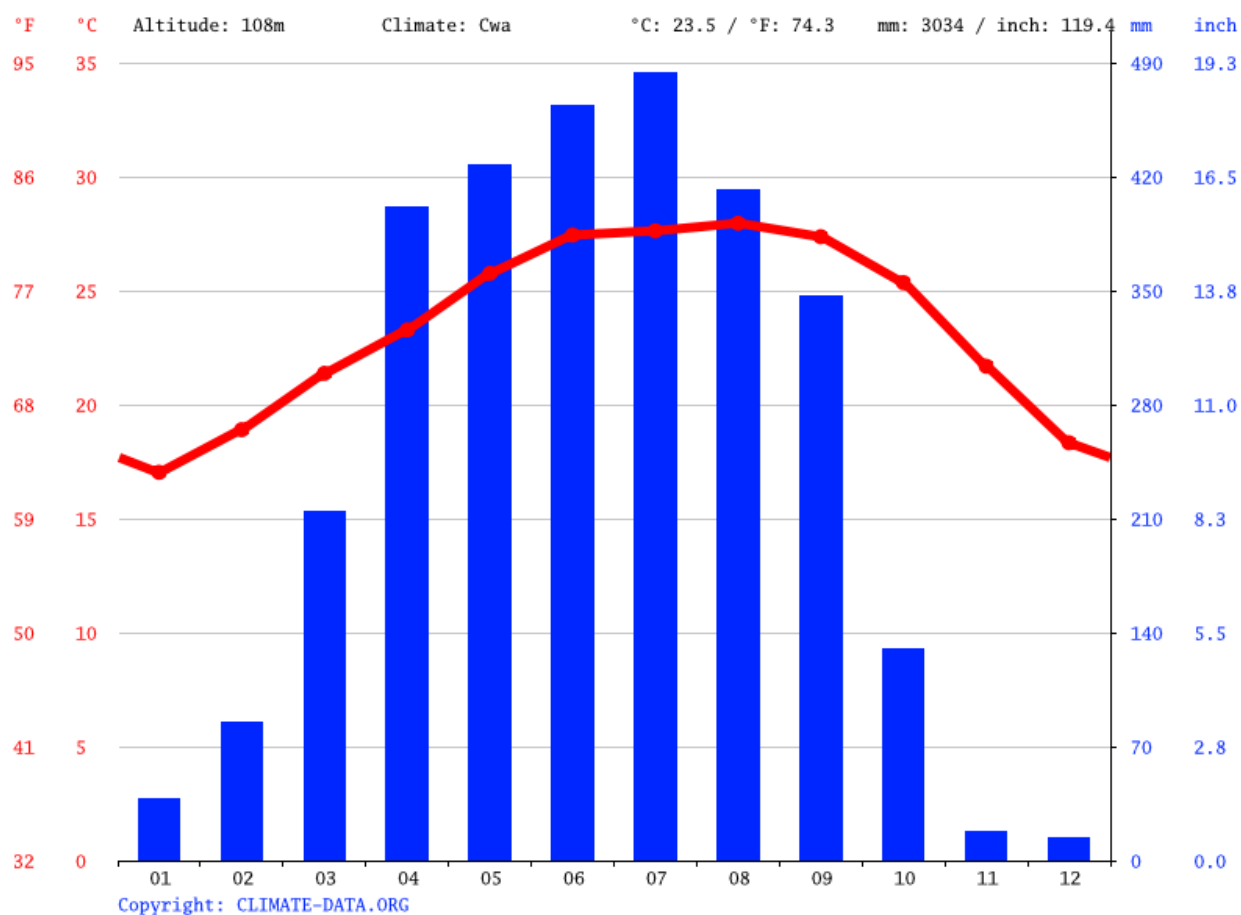
The month with the highest relative humidity is July (86.26 %). The month with the lowest relative humidity is March (71.42 %). The month with the highest number of rainy days is July (27.20 days).

The month with the lowest number of rainy days is December (2.37 days).

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	17 °C (62.7) °F	18.9 °C (66) °F	21.4 °C (70.5) °F	23.3 °C (73.9) °F	25.8 °C (78.4) °F	27.4 °C (81.4) °F	27.6 °C (81.7) °F	28 °C (82.3) °F	27.4 °C (81.3) °F	25.4 °C (77.6) °F	21.7 °C (71) °F	18.3 °C (65) °F
Min. Temperature °C (°F)	12.3 °C (54.2) °F	14.4 °C (57.9) °F	17 °C (62.6) °F	19.8 °C (67.6) °F	22.7 °C (72.8) °F	25 °C (77) °F	25.4 °C (77.8) °F	25.5 °C (77.9) °F	24.8 °C (76.6) °F	22 °C (71.7) °F	17.6 °C (63.6) °F	13.8 °C (56.9) °F
Max. Temperature °C (°F)	22.1 °C (71.7) °F	23.7 °C (74.6) °F	25.8 °C (78.5) °F	26.9 °C (80.4) °F	29.1 °C (84.5) °F	30.4 °C (86.7) °F	30.4 °C (86.7) °F	30.9 °C (87.6) °F	30.5 °C (86.9) °F	28.9 °C (84.1) °F	26.1 °C (78.9) °F	23.2 °C (73.8) °F
Precipitation / Rainfall mm (in)	38 (1)	85 (3)	214 (8)	401 (15)	427 (16)	464 (18)	484 (19)	412 (16)	347 (13)	130 (5)	18 (0)	14 (0)
Humidity(%)	75%	72%	71%	79%	81%	84%	86%	85%	84%	81%	76%	76%
Rainy days (d)	4	7	11	14	17	20	20	20	17	9	2	2
avg. Sun hours (hours)	8.2	8.6	8.9	8.4	9.1	9.1	8.5	8.4	8.7	9.0	8.8	8.4

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

# CLIMATE GRAPH MONTH WISE



## **WASTE DISPOSAL IN THE COLLEGE CAMPUS:**

Generation of wastes from tree droppings and lawn management is a major solid waste generated in the campus. They are segregated at source by providing separate dustbins for disposal of bio-degradable and plastic waste. A proper concrete tank is made for the disposal of waste materials within the college campus.

Reuse of single sided used papers for writing and printing in all the departments has been carried out to reduce paper wastes. Both side printing is also practiced as per requirement. Metal waste and wooden waste is stored and given to authorized scrap for further processing. The solid waste is stored and given to authorized scrap agents for further processing. The solid waste is collected by the municipal cooperation and disposed by their method.

