

GREEN AND ENVIRONMENT AUDIT REPORT

[2021 – 2022]

FOR



**WEST GUWAHATI COMMERCE COLLEGE
GUWAHATI-781012, ASSAM, INDIA**

Conducted By



ENVIRO-TESTING-SERVICES

BIJAY NAGAR, NOONMATI, GUWAHATI-781020, ASSAM

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ETS-GUWAHATI

ENVIRO-TESTING-SERVICES

Accredited by SPCB Assam, ISO 9001, ISO 45001, MSME

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Ref: ETS/WGCC/GEAR/01/2022

Date: 10th September, 2022

COMPLETION CERTIFICATE

This is a Green and Environmental report compiled on the basis of field survey and field investigation of various environmental components such as Land Use Land Cover, Micro meteorological Quality, Ambient Air Quality, Drinking Water Quality, Soil Quality, Noise Quality, Carbon Footprint, Flora, Fauna along with environmental and Energy management practices.

The present work was carried out at the request of the Principal, West Guwahati Commerce College, Guwahati-12, Assam vide order number WGCC /Green Audit/Invitation/2021-22 Dated 20.07.2021. The findings of the study carried out during the period of September 2021 to August 2022 are presented in this report. All the Analysis of Environmental Quality Parameters is done at the laboratories of Enviro Testing Services, Noonmati, Guwahati. The Laboratory is duly recognised by State Pollution Control Board, Assam, ISO 9001 :2015; ISO 45001:2018 and MSME.

For Enviro Testing Services



Date: 10.09.2022

(Dr. Hrishikesh Sarma)
Ex. Director, ETS, Guwahati



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Our special thanks go to the faculty of West Guwahati Commerce College:

Mr. Harendra Kumar Nath

Mr. Sujit Nandi ,

Dr. Iva Devi

Dr. Raktima Hujuri ,

Mrs Madhusmita Devi

Mrs. Manash i Bhattacharjee

Mrs. pratiksha Bannan

We are also thankful to other staff members who were actively involved while collecting the data and conducting field survey

For Enviro Testing Services



(Dr. Hrishikesh Sarma)

Ex. Director, ETS, Guwahati

Date: 10.09.2022

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1.0 Introduction of the Institute

1.1 Brief Introduction

The origin of West Guwahati Commerce College dates back to the year 1992 when prominent academician and a visionary Dr. Binoy Kr. Tamuly propounded the idea of establishing an ideal commerce college in the Maligaon locality to cater to the vital need of commerce education in the greater west Guwahati area. Accordingly, on 17-05-1992 a public meeting was held at Gotanagar Nambari High School premises under the Presidentship of Late Dr. Minadhar Borthakur, Secretary Dulal Ch. Das and Treasurer Sri Tarun Ch. Baruah, it was resolved that an ideal commerce college be established in the West Guwahati locality with the active participation and co-operation of the concerned citizen of the locality.

Within a brief period of time an institute emerged as West Guwahati Commerce College with the unified effort, devotion and sacrifice of the founders with Late N.C Das as the founder Principal and the team of devoted faculty members which soon flourished into a full-fledged commerce college.

The college is situated on the northern side of Maligaon Over Bridge. The college is away from the cacophony of city, the site is ideal for both teaching and learning in a peaceful surrounding. From the point of view of communication, the college is just two minutes walking distance from the city bus route, with a stoppage at Baripara. It is only about 2 kilometers away from Gauhati University.

At present, West Guwahati Commerce College is the third Government Provincialized commerce college in Guwahati Metro.

- **Vision**

West Guwahati Commerce College is committed to highest level of integrity in terms of academics and beyond. Adaptability towards improvement of present conventional higher education system to face the challenges of management, industries and business. The College has initiated a major programme for the next five years to ensure that the graduates who come out after successful completion of these courses would have knowledge, skills and aptitude for gaining employment in all sectors. The college has started a few self-financing courses from the session 2007-2008.

From the academic year 2008-2009, the college has introduced remedial classes for slow learners as well as tutorial classes for students from underprivileged section of the society for their upliftment.

- **Mission**

- To impart need based quality education to the students.
- To help gaining acquisition of practical skill, attitudes relating to professions in various organized and unorganized sectors.
- To prepare professionally qualified commerce graduates with sound knowledge of their core discipline and values of sustainability
- To provide more relevant and career-oriented courses focusing on quality and excellence.
- To produce work forces having self-determination and the ability to explore opportunities.
- To enhance self-confidence and leadership qualities of the students to face present day challenges and risks.
- To promote independent thinking, creativity, innovation and decision-making capability.

1.2 Location of the College Campus

Location	:	Urban
Campus Area	:	4478.01 Sq. mtrs
Built Up Area	:	2448.53 Sq. mtrs

1.3 Physical Structure of the College Campus

Total No of Departments	:	10
Auditorium	:	01
Cafeteria	:	01
Health Centre	:	01
Heritage Corner	:	01
Teachers Common Room	:	01
Libraries	:	01

1.4 Student, Teacher & Employees Strength

Total Number of Students : 908
Total Number of Teachers : 22
Total Number. of Employees: 13 (non-teaching)

2.0 Brief Outlines of Green Audit

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of organization. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere.

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. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more predominant. The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises.

On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric CO₂ from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

3.0 Objective of Green Audit

- (i) Land use & Built-up Environment
- (ii) Geographical Location with Campus Map
- (iii) Present status of Micro meteorology, Ambient air, Noise, Soil quality, Water quality & Illumination Study
- (iv) Floral and Faunal diversity
- (v) Management Practices with respect to Water, Energy and Waste
- (vi) Carbon footprint
- (vii) Organizational Level Efforts

4.0 Methodology

Methodology includes

- (i) Physical inspection of the campus
- (ii) Collection of Primary & Secondary Data
- (iii) Observation and review of the documentation
- (iv) Data analysis

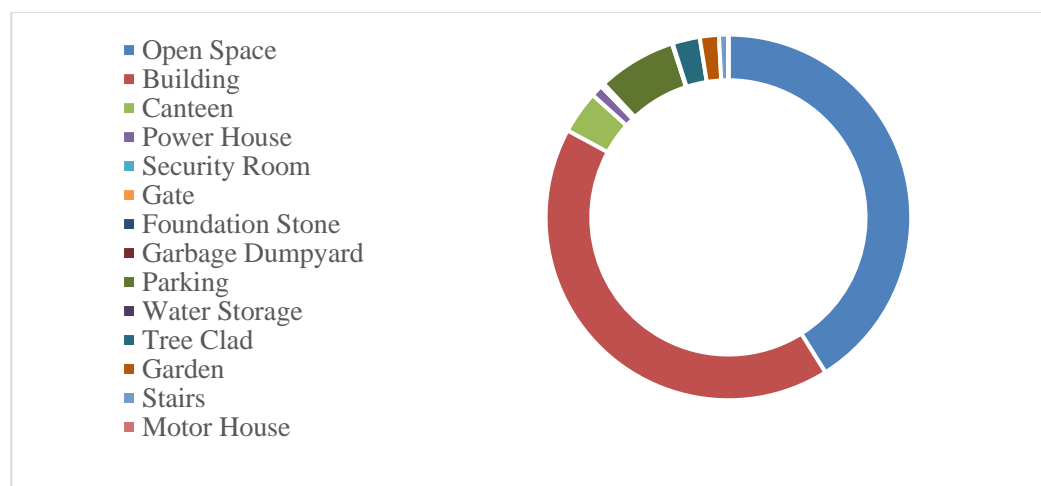
5.0 Objective wise Analysis

5.1 Land use & Built-up Environment

It encompasses area about 4478.01 sq. mts. Total built-up area is 2448.53 Sq. mtrs. out of the total 4478.01 sq. mts of the campus. Both Assam type and multi-storied RRC construction are found within the campus.

The area coverage of different land use classes

West Guwahati Commerce College Campus		
Sr. No.	Feature	Sq. m
1	Open Space	1840.24
2	Building	1871.75
3	Canteen	169.77
4	Power House	47
5	Security Room	2.66
6	Gate	6.25
7	Foundation Stone	0.34
8	Garbage Dumpyard	5.53
9	Parking	310.73
10	Water Storage	2.94
11	Tree Clad	107.94
12	Garden	75.77
13	Stairs	36.67
14	Motor House	0.42
	Grand Total	4478.01



Geographical Location with Campus Map

West Guwahati Commerce College is situated in Guwahati, Kamrup(M) district of Assam, within the geo-position

Latitude N 26⁰⁹/36.06//

Longitude E 91⁰⁴¹/21.76//





Glimpses of West Guwahati Commerce College

5.3 Present status of Micrometeorology, Ambient air, Noise Quality, Water quality, Soil Quality and Illumination Level

5.3.1 Micrometeorology Status

Monitoring Station	Date	GPS Coordinate
Micrometeorology	15.07.2022	N 26 ⁰⁹ /35.47// E 91 ⁰⁴¹ /22.62//

Table 1 : Micrometeorological Study at West Guwahati Commerce College

S/N	Parameters	Unit	Metrological Data at West Guwahati Commerce College	
1	Temperature	°C	Min	26
			Max	32
2	Relative Humidity	%	10.30am	72
			16.30pm	78
3	Wind Speed	Km/hr	10.30am	7.2
			16.30pm	6.4
4	Wind Direction	-	10.30am	SE
			16.30pm	SW

5.3.2 Ambient Air Quality

The average results obtained in the month of July 2022 at West Guwahati Commerce College are presented in Tables 2. All the results meet the National Ambient Air Quality (NAAC) standards.

Monitoring Station	Date	GPS Coordinate	
Ambient Air Quality	15.07.2022	N 26 ⁰⁹ /36.07 ^{//}	E 91 ⁰⁴¹ /23.17 ^{//}

Table 2: Ambient Air Quality at West Guwahati Commerce College

AMBIENT AIR QUALITY						
Duration (24 Hour)			Average			
S/N	Parameters	Unit	Concentration	Limit	Weather Condition*	Test Method
1	Particulate Matter (PM10)	µg/m ³	71.4	100	Clear	IS5182(23)
2	Particulate Matter (PM2.5)	µg/m ³	48.2	60		CPCB Guideline
3	Sulphur Dioxide (SO ₂)	µg/m ³	14.2	80		IS5182(2)
4	Nitrogen Dioxide(NO ₂)	µg/m ³	16.8	80		IS5182(vi)
5	Pb in PM 10	µg/m ³	<0.2	1.0		IS5182(vi)
6	Pb in PM2.5	µg/m ³	<0.2	1.0		IS5182(vi)
7	Ni in PM10	ng/m ³	<0.2	20		IS5182(vi)
8	Ni in PM2.5	ng/m ³	<2.0	20		IS5182(vi)
9	As in PM10	ng/m ³	BDL	06		IS5182(vi)
10	As in PM2.5	ng/m ³	BDL	06		IS5182(vi)

5.3.3 Noise Quality study

In the present study, the noise level measurements were recorded using a precision sound level meter (Envirotech SLM100) with a measuring range between 0-150 dB. The instrument is calibrated before the measurements are recorded. The microphone was placed at 1.0 m from the facades of house, away from any reflecting surface and 1.2 m above the ground. In each location, adequate number of samples was taken at 10-minute intervals. The noise levels were recorded during day time and meteorological conditions: no wind no rain. The Noise Level Monitored (Table 3) and analyzed is found to be within the CPCB Prescribed Limit

Table 3: Noise Quality at West Guwahati Commerce College

S/N	Locations	GPS Co-ordinate		Daytime SPL(dB) [6 am to 10 pm]		CPCB Limit SPL(dB)
				Leq	Range	
1	College Main Gate	N 26°9'36.06"	E 91°41'21.76"	67.9	61 – 72	75
2	Near Ground Floor Class Room	N 26°9'35.67"	E 91°41'22.77"	63.2	52 – 67	
3	Class Room No. 6	N 26°9'35.5"	E 91°41'22.41"	63.4	45 – 62	
4	Near Faculty Room	N 26°9'35.65"	E 91°41'22.99"	63.2	55 – 64	
5	Near College Canteen	N 26°9'37.11"	E 91°41'21.77"	66.4	56 - 63	
6	Near Library	N 26°9'36.66"	E 91°41'23.99"	64.4	58 - 68	
7	Near Class Room 12	N 26°9'37.15"	E 91°41'22.65"	64.8	54 - 67	
8	Roof Top of ADM Building	N 26°9'35.36"	E 91°41'22.94"	66.1	59 – 69	

5.3.4 Drinking Water Quality

Drinking Water samples were collected from various locations of West Guwahati Commerce College and the sampling locations are as follows

Sr.No.	Sampling Locations	GPS Co-ordinate	
1	Inside college drinking water facility	N 26°9'35.67''	E 91°41'22.77''
2	Faculty Room	N 26°9'35.65''	E 91°41'22.99''

Results of analysis of the most relevant water quality parameters are given in Tables 4. The test method for all the parameters along with tolerance limit as suggested by IS-10500 is presented in Table 3. All the parameters with respect to drinking water quality are found to be within the tolerance limit as suggested by IS: 10500.

Table 4: Various Test Methods of Water Quality Monitoring

S/N	Parameters	Test Methods	IS-10500
1	Odour	APHA 20 th Edition, 2150 B	Unobjectionable
2	Temperature (°C)	Thermometry Method	50
3	Turbidity (NTU)	APHA 20 th Edition, 2130B	5
4	pH	APHA 20 th Edition, 4500-H+B	6.5 – 8.5
5	Conductance (mS/cm)	APHA 20 th Edition, 2510B	-
6	Total Dissolved Solid (mg/L)	APHA 20 th Edition, 2540 B	500
7	Total Suspended Solid (mg/L)	APHA 20 th Edition, 2540 B	-
8	Chloride (mg/L)	APHA 20 th Edition, 4500-Cl-B/D	250
9	Residual Chlorine (mg/L)	APHA 20 th Edition, 4500-Cl-B	0.2
10	Sulphates as SO ₄ (mg/L))	APHA 20 th Edition, 4500-SO ₄ ²⁻ E	250
11	Nitrate (mg/L)	APHA 20 th Edition, 4500-NO ₃ -B	45
12	Fluoride (mg/L)	APHA 20 th Edition, 4500-F D	1
13	Calcium (mg/L)	APHA 20 th Edition, 3500 B	75
14	Magnesium (mg/L)	APHA 20 th Edition, 3500 B	-
15	Iron (mg/L)	APHA 20 th Edition, 3111 B	0.3
16	Manganese	APHA 20 th Edition, 3111 B	0.1
17	Zinc	APHA 20 th Edition, 3111 B	5
18	Arsenic	APHA 20 th Edition, 3112 B	0.01
19	Total Coliform (MPN/100 mL)	APHA 20 th Edition, 3111 B	0
20	Faecal Coliform (MPN/100 mL)	APHA 20 th Edition, 9221 E	0

Table 5 : Results of Drinking Water Quality at West Guwahati Commerce College

S/N	Parameters	Unit	DW1	DW2
1	Odour	--	NS	NS
2	Temperature (°C)	°C	27	27
3	Turbidity (NTU)	NTU	0.3	0.2
4	pH	-	7.0	7.1
5	Conductance (mS/cm)	mS/cm	0.42	0.48
6	Total Dissolved Solid (mg/L)	mg/L	48.0	44.0
7	Total Suspended Solid (mg/L)	mg/L	18.0	18.2
8	Chloride (mg/L)	mg/L	21.6	22.2
9	Residual Chlorine (mg/L)	mg/L	<0.01	<0.01
10	Sulphates as SO ₄ (mg/L)	mg/L	9.1	8.7
11	Nitrate (mg/L)	mg/L	7.2	8.1
12	Fluoride (mg/L)	mg/L	0.26	0.28
13	Calcium (mg/L)	mg/L	24.2	25.1
14	Magnesium (mg/L)	mg/L	26.1	26.3
15	Iron (mg/L)	mg/L	0.12	0.13
16	Manganese	mg/L	0.004	0.006
17	Zinc	mg/L	0.05	0.04
18	Arsenic	mg/L	<0.001	<0.001
19	Total Coliform (MPN/100 mL)	mg/L	03	03
20	Faecal Coliform (MPN/100 mL)	mg /L	NIL	NIL

5.3.5 Quality of Soil in the Study Area

Soil sample is collected from the college campus as follows.

Sr.No.	Sampling Locations	GPS Co-ordinate	
1	Near College Main Gate	N 26 ⁰⁹ /36.06//	E 91 ⁰⁴¹ /21.76//

It was analyzed for the most relevant physical and chemical parameters. It may be noted from the results of analysis that Of the soil sample have little alkaline pH . The presence of N, P, K and organic matter content is considerable.

Table 6: Results of Soil Quality Monitoring at West Guwahati Commerce College

S/N	Parameters	[S1]
1	PH (1: 2)	7.6
2	Conductance (ms)	0.38
3	Sand (%)	87.1
	Silt (%)	1.04
	Clay (%)	12.2
4	Water Holding Capacity (%)	44.3
5	Bulk Density (gcm ⁻³)	1.4
6	Cation Exchange capacity (meq/kg)	0.31
7	Nitrogen (%)	0.06
8	Potassium (mg/kg)	18.3
9	Sodium (mg/kg)	21.6
10	Calcium (g/kg)	16.8
11	Magnesium (mg/kg)	24.2
12	Phosphorous (mg/kg)	9.2
13	Organic matter (%)	0.64
14	Sodium Absorption Ratio (SAR)	1.6
15	Zinc (mg/kg)	16.2
16	Copper (mg/kg)	6.4

5.3.6 Illumination Study

Adequate, well-balanced levels of illumination are essential in establishing safe and productive working conditions. Good lighting plays an important role in safeguarding health at work by enabling employees to perform their work comfortably and efficiently. Accordingly, there should be an appropriate level of the light falling on the surface on which workers are working. Excessive contrast, strong glare and light flickering in their fields of vision are also inappropriate.

To ensure good lighting the person responsible for a workplace should arrange for a suitable assessment on the lighting levels in the workplace. Good lighting can decrease errors by 30-60 % as well as decrease eye-strain and the headaches, nausea, and neck pain which often accompany eyestrain.

The Lux Levels were measured during day time in the college campus as well as in the office buildings. In this present study the Installed load Efficacy Ratio (IIER) are calculated as per BEE Lighting Code.

1	A	B	C	D
2		Equation	Value	Unit
3	Time of Measurement		Day time	
4	Room Identification			
5	Number Of lamps			
6	Length of the room			m
7	Width of the room			m
8	Floor Area	$A = \text{Length} * \text{Width}$		m^2
9	Height of the lamp from the Plane of measurement			m
10	Room index	$(L * W) / Hm * (L + W)$		
11	Average room illuminance	$(\text{Max} + \text{Min. lux}) / 2 * \text{Correction factor}$		lux
12	Measured/estimated circuit power			W
13	Installed lighting Efficacy	$(\text{Avg. illum} * \text{Floor area}) / \text{Circuit watts}$		lm/W
14	Target lighting efficacy			lm/W
15	Installed lighting Efficacy ratio (ILER)	Installed lighting efficacy/Target lighting efficacy		

Installed lighting Efficacy ratio (ILER)	Assessment
0.75 or above	Satisfactory to good
0.51 to 0.74	Review suggested
0.5 or less	Urgent action required

Table 7: Results of Installed lighting Efficacy ratio (ILER) at West Guwahati Commerce College

S/N	Location	ILER	Assessment
1	Room No. 6	2.78	Satisfactory
2	Room No 7	1.50	Satisfactory
3	Room No 10	1.25	Satisfactory
4	Room No 12	2.06	Satisfactory
5	Room No 13	2.95	Satisfactory
6	Room No 14	1.74	Satisfactory
7	Room No 16	1.67	Satisfactory
8	Room No 17	4.69	Satisfactory
9	Room No 18	5.18	Satisfactory
10	Room No 19	4.75	Satisfactory
11	Room No 20	0.78	Satisfactory
12	Library	5.18	Satisfactory
13	Principal Office	3.75	Satisfactory
14	Faculty Room	4.74	Satisfactory
15	College Canteen	5.86	Satisfactory



Ambient Air and Meeteorology Monitoring at West Guwahati Commerce College



Noise Sampling at different locations of the College



Illumination Study at West Guwahati Commerce College



Drinking Water and Soil Sampling at West Guwahati Commerce College

Photographic view of Environmental Monitoring at West Guwahati Commerce College

5.4 Floral and Faunal diversity

5.4.1 Floral Biodiversity

The survey was conducted in the month of July 2022 following the Quadrat sampling procedure. In the study area the vegetation is a complex of plant communities with considerable diversities. Since the plants showed normal and very good growth, there appears to be no adverse environmental factors prevailing in the area.

Plants of all types, in general, showed healthy and luxuriant growth in terrestrial, aquatic and aerial habitats in the study areas. Leaf diseases (leaf spot and shot-holes) on the aerial parts of the plants were very infrequently observed and did not show any adverse effect on the growth of the plants.

In this present study, different types of flora along with the total of species of the respective flora identified in the college campus are as follows.

<u>Different types of flora</u>		<u>Total number of species</u>
Full Grown Tree	:	60
Semi Grown	:	10
Bushes	:	5

List of plants are presented in Table- 8

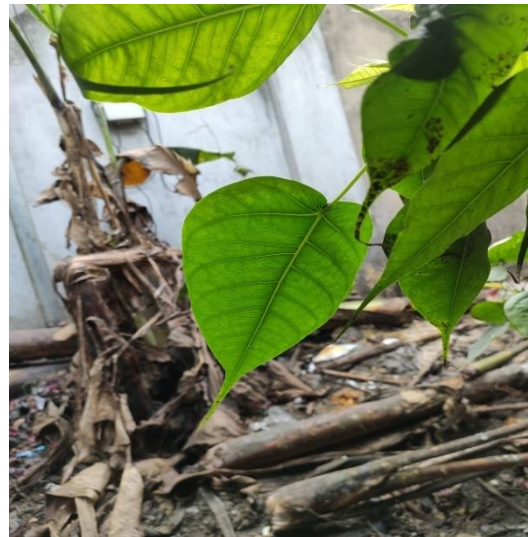
Table 8 : List of Plants recorded at West Guwahati Commerce College

Plant list of West Guwahati Commerce College						
Sl no.	Family	Scientific name	Vernacular name	English name	Uses	Number
1	Moraceae	<i>Ficus religiosa</i> L.	Ahot	Peepal tree	Bark and ripe fruits are used in the treatment of asthma.	2
2	Rutaceae	<i>Murraya koenigii</i> (L.) Spreng	Narasingha	Curry leaf tree	Leaves are used in culinary purpose	1
3	Myrtaceae	<i>Psidium guajava</i> L.	Modhuriaam	Guava	Fruit is edible, young leaves are	5
4	Sapotaceae	<i>Mimusops elengi</i> L.	Bokul	Spanish cherry	Ornamental	3
5	Combretaceae	<i>Terminalia arjuna</i> (Roxb.)Wight & Arn.	Arjun	Arjun tree	Bark decoction is used to treat hypertension and heart diseases.	2
6	Anacardiaceae	<i>Mangifera indica</i> L.	Aam	Mango	Fruits edible	6
7	Arecaceae	<i>Cocos nucifera</i> L.	Narikol	Coconut	Fruits edible	2
8	Annonaceae	<i>Monoon longifolium</i> (Sonn.)B. Xue & R.M.K Saunders	Debodaru	Indian mast tree	Ornamental	2
9	Pinaceae	<i>Pinus roxburghii</i>	Pine	Pine	Ornamental	4
10	Musaceae	<i>Musa paradisiaca</i> L.	Kolgos	Banana	Whole plant along with fruits are edible	14
11	Arecaceae	<i>Borassus flabellifer</i> L.	Tal	Toddy palm	Unripe Fruits edible, leaves are used to make hand fans	1
12	Myrtaceae	<i>Syzygium cumini</i> (L.)Skeels	Jamu	Java plum	Fruits edible	2
13	Moraceae	<i>Artocarpus heterophyllus</i> Lam.	Kothal	Jackfruit	Fruits edible	2
14	Rhamnaceae	<i>Zizyphus jujube</i> Mill.	Bogori	Jujube	Fruits edible	5
15	Meliaceae	<i>Azadiracta indica</i> Nees.	Neem	Indian lilac	Seed oil is used as pesticides and insecticides.	1
16	Lyrthaceae	<i>Lawsonia inermis</i> L.	Jetuka	Henna tree	Leaves are crushed and juice is used as Dye	1
17	Asteraceae	<i>Tagates erecta</i> L.	Genda	Marigold	Ornamental	1
18	Apocynaceae	<i>Cascabela thevetia</i> (L.)Lippold	Korobi	Yellow oleander	Ornamental	3
19	Asparagaceae	<i>Dracaena trifasciata</i> (Prain) Mabb.	Snake plant	Sanseviera	Ornamental	1
20	Rutaceae	<i>Citrus aurantifolia</i>	Gol Nemu	Key Lime	Fruits edible	1

21	Malvaceae	<i>Bombax ceiba</i> L.	Simolu tula	Silk cotton tree	Silk cotton is obtained from this tree . bark juice is used to treat intestinal worms and diarrhoea.	1
22	Callophyllaceae	<i>Mesua ferrea</i> L.	Nahar	Ceylon ironwood	Ornamental , timber is used for making furnitures.	2
23	Lamiaceae	<i>Coleus sp.</i>	Pattabahar		Ornamental	4
24	Arecaceae	<i>Areca catechu</i> L.	Tamul	Betel nut	Nut is chewed with Betel leaf and works as digestive.	4
25	Fabaceae	<i>Dalbergia sissoo</i> Roxb. ex DC.	Sisu	Indian rosewood	Avenue tree, Timber is used for making furnitures.	5
TOTAL						75



Areca catechu L.



Ficus religiosa L



Mesua ferrea L.



Coleus sp.



Bombax ceiba L



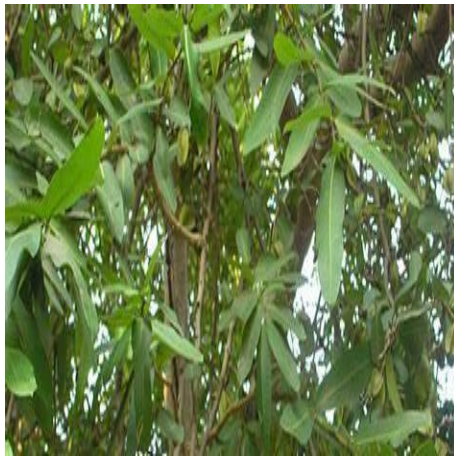
Monoon longifolium



Azadiracta indica



Psidium guajava



Terminalia arjuna



Colocasia esculenta sp.

Few Photographs of Plants in the West Guwahati Commerce College Campus

5.4.2 Faunal Biodiversity

In view of the need to determine the faunal characteristics of the study areas within the constraints of time, a checklist survey method was followed. Checklist surveys are employed primarily to confirm the presence of species, and sometimes the number of individuals of species in a surveyed area.

The survey was conducted during July 2022. A few numbers of different species were recorded in the West Guwahati Commerce College Campus.

Table 9 : Faunal Biodiversity Recorded in the West Guwahati College Campus

List of avian species recorded in the College campus

Serial No.	Common Name	Scientific Name
1	Owl	<i>Bubo benghalensis</i>
2	House Crow	<i>Corvus splendens</i>
3	Hedge Sparrow	<i>Prunella modularis</i>
4	Common nightangle	<i>Luscinia megarhynchos</i>
5	Pigeon	<i>Columba livia</i>
6	House sparrow	<i>Passer domesticus</i>
7	Asian koel	<i>Eudynamys scolopaceus</i>
8	Indian Myna	<i>Acridotheres tristis</i>
9	Bulbul	<i>Hypsipetes leucocephalus</i>
10	Parrot	<i>Psittacula krameri</i>
11	Pigeon	<i>Columba livia domestica</i>
12	House crow	<i>Corvus splendens</i>
13	Red Vented Bulbul	<i>Pycnonotus cafer</i>
14	Asian Pied Starling	<i>Gracupica contra</i>
15	Spotted Dove	<i>Spilopelia chinensis</i>
16	Common Myna	<i>Acridotheres tristis</i>
17	Purple Sunbird	<i>Cinnyris asiaticus</i>
18	White wagtail	<i>Motacilla alba</i>

List of butterflies recorded in the College campus

Serial No.	Common Name	Scientific Name
1	Common spotted flat	<i>Celanorrhinus leucocera</i>
2	Indian cabbage white	<i>Pieris canidia</i>
3	Common sailor	<i>Neptis hylas</i>
4	Lemon Pansy	<i>Junonia lemonias</i>
5	Red Lacewing	<i>Cethosia bibilis</i>
6	Common crow	<i>Eupolea core</i>
7	Grey Pansy	<i>Junonia atlites</i>
8	White Admiral	<i>Limenitis Camilla</i>
9	Common Mormon	<i>Papilio polytes</i>
10	Common Grass Yellow	<i>Eurema hecabe</i>



Common Myna



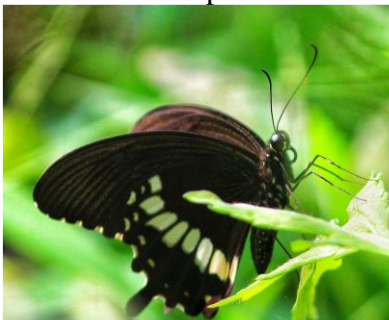
Pigeon



House Sparrow



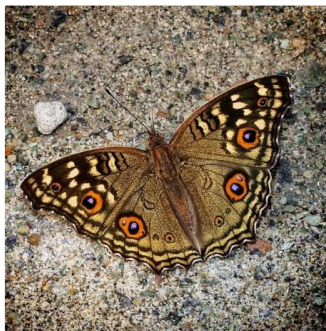
Spotted Dove



Common Mormon



Common Grass Yellow



Lemon Pansy



Common crow

5.5 Management Practices with respect to Water, Energy and Waste

5.5.6 Water Management Practices

- Water Storage per day= 5000 Lt
- Water Tank Cleaning=Twice per Annum
- Daily Consumption of water= 5000 Lt

Department	Wise use of water	Water Leakage Repair	Use of push Tap	Use of Water purification	Rain Water Harvest	Water Use Per Day	Water Management Practices
Library	✓	-	x	-	x	-	✓
Office	✓	-	x	-	x	-	✓
Information Technology	✓	-	x	-	x	-	✓
Principal room	✓	-	x	-	x	200	✓
Vice-principal room	✓	-	x	-	x	250	✓
Examination room	✓	-	x	-	x	300	✓
Teacher Common Room		-	x	-	x	180	✓
Boys Common Room	✓	-	x	-	x	500	✓
Girls Common Room	✓	-	x	-	x	500	✓
Auditorium	✓	-	x	-	x	500	✓
Student Toilet	✓	-	x	-	x	500	✓
Canteen	✓		x	-	x	500	✓
Gardening	✓	-	x	-	x	400	✓

Observations

- (i) No leaking taps, pipes, valves were identified in the college premise.
- (ii) There are no any push button taps
- (iii) The college has optimized its irrigation system at night or early morning hours to minimize evaporation for gardening.
- (iv) Water escaping from overflows either inside or outside building was not identified during onsite audit.

5.5.2 Energy Management Practices

- Electric Load = 22 KW
- Daily Consumption=unit 130 kwh
- Electric Bill paid for the period of 2021-22(Bill Attached)

Department	No. of Tubes	No. of CFL Light	No. of LEDs	No. of Fans Ceiling+wall+ exhaust	No. of LCD projector	No. of Computers + Printers	No. of photocopier	Common / sophisticated analytical equipments	No. of Ac
Examination Branch	06	01		05	01				
Vice principal's room	02			02					
General Class Room	110			102					
Library	08	02				01			
Office	05	02		08		07	01		
Teacher Common Room	06			07					
Boys Common Room	02			02					
Girls Common Room	02			02					
Student Toilet	02			01					
Canteen	02			03					

Observations:

- i) There is minimum or practically negligible use of lights during day time as the building structure has possibility of daylight usage
- ii) The lighting arrangements are well balanced with arrangements to switch ON and OFF
- iii) The policy of college is switch off the lights and other electrical equipment when they are not in use.
- iv) Cleanliness is well maintained. In- house light fittings are cleaned time to time.
- v) Lights are negligibly operated during day time. The lights are operated manually. There is no any sensor-based lighting system
- vi) The college is utilising natural lighting as first preference
- vii) Computers, printers, photocopiers and other equipment are switched off at the end of the day.
- viii) The all the electrical equipment is well operated. The overall electrification system is regularly monitored by a duly qualified electrician.
- ix) Regarding the use of renewable energy college has not installed any solar panels yet.
- x) College Management is evaluating the feasibility of introduction of the solar PV generation.

5.5.3 Waste Management Practices

Waste can be solid as well as liquid. Solid waste can be further divided into

- (i) Biodegradable- Like food waste, waste from toilets etc.
- (ii) Non-biodegradable-Like Plastics, tins, glassware etc.

Along with these, there are some hazardous wastes generated from laboratories, and E-waste (Computers, electric and electronic parts). Besides this, liquid waste is also there. The institute has over 2600 stakeholders which includes students, teaching staff and non-teaching staffs, thus a huge amount of waste is generated on a daily basis.

Sl/No.	Source	Type of waste	Approximate amount of waste generated per day
1.	Classroom, staff room, Library	Paper, pen, wrappers, plastic bottles etc	Biodegradable waste = 1 kg Non-biodegradable waste = 5 kg. Liquid waste= 20 kL E waste per annum = 50 kg
2.	Laboratories	Chemicals, glassware, waste water and solvents	
3.	Toilets	Sanitary napkins, waste water etc.	
4.	Canteen	Disposable plates, leftover food and water, wrappers, plastic bottles etc.	
5.	Office and computer centre	Papers, wrappers, plastics, paper pins, E-waste etc.	

Waste management practices adopted by the College

1. Solid waste generated in the campus

- dry and wet waste are collected in dustbins with two chambers which are placed in the library, teachers' common room, canteen, near classroom etc.
- Segregation of solid waste into dry and wet waste in different bins.
- Specific waste management plans are adopted to manage solid waste in the campus.
- E-waste includes malfunctioning computer monitors, printers, scanners, calculators, keyboards, mouse, cables, circuit boards, bulbs etc. generated from campus is subjected to handover E-waste authorised agency

2. Toilet waste

- Soak pits are available in toilets
- Toilet waste is connected to large tanks. These tanks are cleaned periodically.

3. Other waste

- Sanitary napkins are subjected to burn in the incinerator.
- Leaf litters are presently burnt but planned for vermicomposting.
- Waste like broken bulbs, tubes etc. which cannot be repaired are dumped temporarily at the dumping bin and later on disposed of to the municipality collection van.

6.0 Carbon footprint due to Transport System

Emission of CO₂ through transport system – both public and private – is very high in India as India is credited with the third rank in carbon emission in this regard. It is estimated that in India, 9% of the total carbon is emitted by the transport system.

In West Guwahati Commerce College during survey, it was observed that on an average, there are 07 number of four wheelers are used by faculty while 200 number of two wheelers are used by students and staff. Further student uses bicycles 100 numbers. It is appropriate to calculate the petrol consumption separately for four wheelers and two wheelers.

The fuel consumption by vehicles is determined by the type of vehicle, year of manufacturing, maintenance status, traffic system of the particular area, etc. High-end and medium-range bikes consume different quantities of petrol.

Conversion table to calculate carbon emission by vehicles per liter is very complicated in view of the local variables to be taken for calculation. Instead, a simple but universally accepted calculation calendar for various types of fuels and their CO₂ conversion rate was adopted.

6.1 Emissions of CO₂ by transport system at West Guwahati Commerce College

It is estimated that the average mileage covered by each vehicle is about	10 km.
The total mileage covered by the 200 number of two wheelers per year	$(200 \times 10 \times 200) = 400000$ km
The average mileage covered by four wheelers is	8 km per day
The total mileage covered by 07 four wheelers per year	$(07 \times 8 \times 200) = 11200$ km
The total mileage covered by two and four wheelers per year	$(400000 + 11200) = 411200$ km
The standard fuel consumption for two wheelers is taken	35 km / 1L of Fuel
The standard fuel consumption for Four wheelers is taken	15 km / 1L of Fuel
The total quantity of petrol consumed by 200 number Two Wheelers	$(400000 / 35) = 11429$ L
The total quantity of fuel consumed by 07 number four wheelers per year	$(11200 / 15) = 747$ L
The total fuel consumption per year (Two+ Four) Wheelers	$(11429 + 747) = 12176$ L
Combustion of 1 litre of diesel/petrol leads to the emission of CO ₂	2.68 kg
The total quantity of CO₂ emitted by per liters of fuel per year	$(12176 \times 2.68) = 32632$ kg

6.2 Flora and Carbon Footprint Reduction

Carbon Absorption Capacity of Flora at West Guwahati Commerce College

The carbon footprint calculation is based on the following standard accepted assumptions

- Carbon absorption capacity of one full grown tree = 6.8 kg CO₂
- Carbon absorption capacity of one semi grown tree = 3.4 kg CO₂
- Carbon absorption capacity of one Shrubby vegetation = 0.2 kg CO₂

Total CO₂ absorption Capacity of Flora

Type of Tree	Total No. of Tree	Amount of CO ₂ absorption/ tree (kg)	Total CO ₂ absorption (kg)
Full Grown	60	6.8	60 x 6.8 = 408
Semi Grown	10	3.4	10x3.4 = 34
Shrubby Vegetation	5	0.2	5x0.2 = 1
Total amount of carbon absorption by Flora			443

6.3 Oxygen Emission Capacity of Flora at West Guwahati Commerce College

The carbon footprint calculation is based on the following standard accepted assumptions

- Oxygen Emission capacity of one full grown tree = 117.6 kg O₂
- Oxygen Emission capacity of one semi grown tree = 58.8 kg O₂
- Oxygen Emission Capacity of 400 number of Shrubby vegetation = 550 kg O₂

Type of Tree	Total No. of Tree	Amount of O ₂ Emission / tree (kg)	Total O ₂ Emission (kg)
Full Grown	60	117.6	60 x 117.6 = 7056
Semi Grown	10	58.8	10x58.8 = 588
Shrubby Vegetation	5	550	5 x 550/400 = 6.9
Total amount of Oxygen Emission by Flora			7651

6.4 Summary of Carbon Footprint Reduction at West Guwahati Commerce College

Carbon Absorption Capacity of Flora	443 kg
Oxygen Emission Capacity of Flora	7651 kg
The total quantity of CO ₂ emitted by vehicles	32632kg

6.5 Summary of Carbon Footprint per person at West Guwahati Commerce College

Total Carbon Footprint in kg	:	32632kg
Total Average number of persons in the College	:	940
Carbon emission per person in kg	:	$32632/940 = 34.7$
Carbon emission per person in kg	:	34.7 kg

7.0. Organizational effort

S/N	Items	Responses
Organizational effort		
1	Is the college having campus green team?	Yes. Copy Attached
2	Have you established an environmental mission/vision for your campus	Yes. College has established Environment to make the students and teachers aware about the environmental issues and challenges. The college has organized several programmes addressing environmental awareness among students and community as well (e.g. World Wetland Day, 2 nd February; World Environment Day, 5 th June; World Wildlife Conservation Day, 4 th December; World Soil Day 5 th December).
3	College initiates any tree plantation programme	Yes. programme organized within and outside the college campus particularly on College Foundation Day and World Environment Day (5 th June)
4	How may numbers of existing tree, shrubs and herbs species	In total 75
5	How may numbers of existing full-grown tree, semi grown trees	Full Grown - 60 Semi Grown – 10
6	Is there any lawn in the college campus? If yes what is area	No, planning to do

7	Is the college encouraging sustainable behaviour via: Education campaigns? Such as Posters, placards, Messages, incentives? Contests? awards?	Yes, College organized various programme encouraging sustainable behaviour such as World Environment day (5 th June), World Wetlands day (2 nd February), National Science day (28 th February), International Yoga Day (21 st June), World AIDS Day(1 st December), No Tobacco Day (31 st May)
8	Is the college staff modelling sustainable behaviour for students, peers, and community?	College has adopted a village namely Senduri Ghopa, District Kamrup (Rural). Various community development work in terms of education, health & hygiene, environmental education etc. has been initiated.
9	Is the college having solar, wind, or other forms of renewable energy?	No. Planning to initiate very soon
10	What are the good practices pertaining to Transport?	Encourage the use of public transport, Bicycle and Zero Use of Plastic in the college campus.
11	What is the average number of vehicle movements in terms of two & Four wheelers	Two Wheelers: 200 - 210 Four Wheelers: 07 – 09
12	Has the college initiated to reduce its carbon footprint	Yes, College has taken several initiatives to reduce total carbon footprint amount within the college campus.
13	Has the college adopted any specific measures to reduce pollution	To motivate students, social service competitions are being held on special occasion such as college week, environment day, Science Day, Azadi ka Amrit Mahotsav etc., where they are awarded for their active participation.



Plantation Activity by West Guwahati Commerce College



Yoga day, Health Check up, Village Adaptation Activity by West Guwahati Commerce College

8.0 Recommendations

Water Management

- (i) The college Management needs to consider the low - flow faucets, as the replacement for the existing conventional taps.
- (ii) The toilet and wash room should be equipped with push button
- (iii) Sprinkler and drip irrigation should use for gardening
- (iv) The college should install rain water harvesting unit
- (v) More advanced water purification treatment facilities may be installed within the campus in order to ensure safe drinking water.

Energy Management

- The public lights within the campus may be run with solar panels and the replacement of existing lights should be done with LED lamps.
- Energy auditing should be done with the help of Energy Management Centre (EMC)

Waste Management

- Specific waste management plans should be adopted to manage solid waste in the campus, use of plastic carry bags, plastic glass/ cups/plates and flex boards should be banned inside the College to create a plastic free zone.
- For managing organic wastes organised vermicompost plant may be installed in the campus
- There should be a proper system for the management of hazardous wastes.
- ETP and STP should install in the campus properly

Green Management

- Green habitat concept should be adopted for all the building construction activities of the college in future, which may help a long way in reducing energy usage, increasing aesthetic appeal of the buildings and class rooms, besides reducing carbon foot print.
- Further, more green spaces should be established all around the campus around larger trees and shades for the benefit of the students. All these aspects should monitor by Green Campus Committee.
- Air quality, drinking water quality should monitor annually.

- Annexure 1 : Scanned copy of Green Campus Committee of West Guwahati
Commerce College*
- Annexure 2 : Scanned copy of electric bill paid receipt*
- Annexure 3 : Scanned copy of ISO Certificate*
- Annexure 4 : Scanned copy of PCB Certificate*
- Annexure 5 : Scanned copy of MSME Certificate*



WEST GUWAHATI COMMERCE COLLEGE

Maligaon, Baripara, Pandav Nagar, Guwahati-781012

Email: wgcc1992@gmail.com

Website: wgccguwahati.in

Phone : 0361-3514592

Ref. No.:

Date:

Date: 12.12.2022

I have the honour to inform you that a Green Campus Committee was formed in 09.09.2021 with the following composition:

Chairman: Mr. Harendra Kumar Nath
Convenor: Sujit Nandi
Members: Dr. Raktima Hujuri
Mrs Madhusmita Devi
Mrs. Manashi Bhattacharjee
Mrs. Pratiksha Barman

Thanking You,

Bhatia
12-12-2022

Mr. Bhabananda Dutta
West Guwahati Commerce College
Baripara, Maligaon, Guwahati-12

Principal I/C
West Guwahati Commerce College
Maligaon, Guwahati-781012



Assam Power Distribution Company Limited

NAME OF ELECTRICAL SUB-DIVISION / IRCA :

CIN: U40109AS2003SGC007242


GSTIN: 18AABCL1354J1ZJ

ELECTRICITY BILL

[136]

Website: www.apdcl.org

Centralized Customer Care Number: 1912

Consumer Name: PRINCIPAL WEST GUWAHATI COMMERCE CO Address: .P.NAGAR,JALUKBARI	Consumer Number: 023010089575 Old Consumer Number: 53000012442 DTR Number: A01R Pole Number :07501R119 Connected Load in KW: 10.0 Contracted Demand in KVA: 11.76 Load Security:null Meter Number: AP10003428	Bill Amount: 13852.0 Due Date: 16-Sep-2022 Bill Number:900649746 Bill Period: 01-Aug-2022 To 31-Aug-2022 Bill Date : 01-Sep-2022 Number of Days: 31 Meter Status: RUNNING Billing Status: NORMAL
Contact Number : 9435909924 Email : Tariff Category: LT IV COMMERCIAL Supply Voltage Level: LT		 023010089575

Meter Reading Details

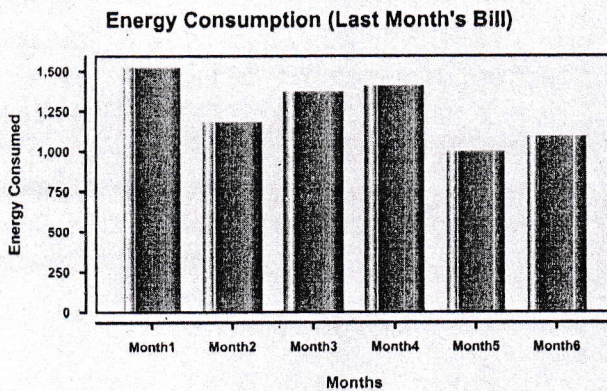
Reading Type	Meter Number	MF	Previous Reading in KWh	Previous Export in KWh	Current Reading in KWh	Current Export in KWh	Difference Reading in KWh	Difference Export in KWh
KWH (Normal)	AP10003428	1.0	20306.0	0.0	21828.0	0.0	1522.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Units Consumed	PF Penalty/Rebate	LT Metering Penalty @ 3%	DTR Penalty @ 10%	HT Rebate @ 3%	Billable Units in KWh
1522.0	30.0				1492.0
0.0	0.0				0.0
Recorded Demand (in KVA)	0.0	Maximum Demand (in KVA)	0.0	Billing Demand (in KVA)	11.76
Power on Hours	0.0	Freeze Amount	0.0	Availability Percentage	Average Power Factor
					96.0

Billing Details

Current Demand	Outstanding Amount	Adjustment Amount	Government Subsidy	Solar Rebate	Net Bill Amount
Rs. 13851.95	Rs. 0.00	Rs. 0.00	Rs. 0.0	0.0	Rs. 13852.0
					In Words: Rupees Thirteen Thousands Eight Hundred Fifty Two Only

PLEASE PAY YOUR BILL ON TIME AND HELP US TO SERVE YOU BETTER



Charges Breakup			
Details	Units	Rate	Amount
Energy Charge	1492.0	7.6	11339.20
	0.0	0.0	0.00
	0.0	0.0	0.00
Total Energy Charge			11339.20
Energy Charge Re-Estimated			0.00
Demand/Fixed Charge	10.0	140.0	1426.85
FPPPA Charge		0.3	447.6
Electricity Duty		5.0	638.3
Govt. Subsidy		0.0	0.0
Meter Rent		0.0	0.0
Transformer M D Charge			
Overdrawal Penalty			0.0
Adjustment Amount			0.0
Charges for dishonoured cheque			0.0
Arrear Principal			0.0
Arrear Surcharge			0.0
Current Surcharge			0.0
Misc. Arrear			0.0
Rebate if paid before due date			0.0
Payable amount before due date			13852.0
Payable amount after due date			13852.0

Checked by E&OE:

Prepared by: MDM

Signature with seal

*Allowed to pay
Rs 13852.00
Bante
9/9/2022*



Assam Power Distribution Company Limited

[138]

NAME OF ELECTRICAL SUB-DIVISION / IRCA :


CIN: U40109AS2003SGC007242

GSTIN: 18AABCL1354J1ZJ

ELECTRICITY BILL

Website: www.apdcl.org

Centralized Customer Care Number: 1912

Consumer Name: PRINCIPAL WEST GUAHATI COMMERS COLL	Consumer Number: 023010090460	Bill Amount: 3963.0
Address: ,BOARE PARA,JALUKBARI	Old Consumer Number: 54000001476	Due Date: 16-Sep-2022
Contact Number : 9435909924	DTR Number: A01R	Bill Number: 900649774
Email :	Pole Number : 07501R117	Bill Period: 01-Aug-2022 To 31-Aug-2022
Tariff Category: LT V(A) GENERAL PURPOSE (OTHER	Connected Load in KW: 0.0	Bill Date : 01-Sep-2022
Supply Voltage Level: LT	Contracted Demand in KVA: 11.76	Number of Days: 31
	Load Security: 16500.0	Meter Status: RUNNING
	Meter Number: AP10003429	Billing Status: NORMAL
		
		023010090460

Meter Reading Details

Reading Type	Meter Number	MF	Previous Reading in KWh	Previous Export in KWh	Current Reading in KWh	Current Export in KWh	Difference Reading in KWh	Difference Export in KWh
KWH (Normal)	AP10003429	1.0	2648.0	0.0	2976.0	0.0	328.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0

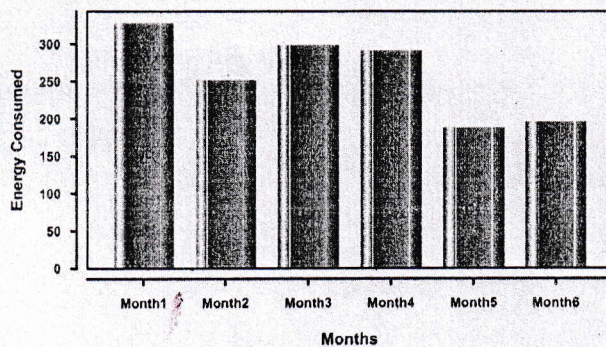
Units Consumed	PF Penalty/Rebate	LT Metering Penalty @ 3%	DTR Penalty @ 10%	HT Rebate @ 3%	Billable Units in KWh		
328.0	7.0				321.0		
0.0	0.0				0.0		
Recorded Demand (in KVA)	0.0	Maximum Demand (in KVA)	0.0	Billing Demand (in KVA)	11.76	Average Power Factor	97.0
Power on Hours	0.0	Freeze Amount	0.0	Availability Percentage			

Billing Details

Current Demand	Outstanding Amount	Adjustment Amount	Government Subsidy	Solar Rebate	Net Bill Amount
Rs. 3962.69	Rs. 0.00	Rs. 0.00	Rs. 0.0	0.0	Rs. 3963.0
					In Words: Rupees Three Thousand Nine Hundred Sixty Three Only

PLEASE PAY YOUR BILL ON TIME AND HELP US TO SERVE YOU BETTER

Energy Consumption (Last Month's Bill)



Charges Breakup

Details	Units	Rate	Amount
Energy Charge	321.0	6.55	2102.55
	0.0	0.0	0.00
	0.0	0.0	0.00
Total Energy Charge			2102.55
Energy Charge Re-Estimated			0.00
Demand/Fixed Charge	10.0	155.0	1579.73
FPPPA Charge		0.3	96.3
Electricity Duty		5.0	184.11
Govt. Subsidy		0.0	0.0
Meter Rent		0.0	0.0
Transformer M D Charge			
Overdrawal Penalty			0.0
Adjustment Amount			0.0
Charges for dishonoured cheque			0.0
Arrear Principal			0.0
Arrear Surcharge			0.0
Current Surcharge			0.0
Misc. Arrear			0.0
Rebate if paid before due date			0.0
Payable amount before due date			3963.0
Payable amount after due date			3963.0

Checked by E&OE:

Prepared by: MDM

Signature with seal

Allowed to pay Rs 3963.00
(Signature)
9/9/2022

ASSAM POWER DISTRIBUTION COMPANY LIMITED

Jalukbari
ELECTRICITY BILL

Website: www.apdcl.org

Centralised Customer Care Number : 1912

Consumer Name: **PRINCIPAL WEST**
GUWAHATI COMMERCE CO
Address: P.NAGAR, JALUKBARI

Consumer Number: **023010089575**

Bill Amount: **11369**

Installation Number: NA

Due Date: **2021-09-21**

DTR No.: A01R

Bill No.: 900261005

Pole No.: 000

Bill Date: 2021-09-06

Reference No.: NA

Connected Load in KW: **10**

Bill Period: 2021-08-01 to 2021-08-31

Contact No.: 9101638471

Contract Demand in KVA: 11.76

No. of Days: 31

E-Mail:

Load Security Held: 0

Meter Status: WORKING

Tariff Category: LT IV COMMERCIAL

Meter Number: AP10003428

Billing Status: NORMAL

Supply Voltage Level: LT

Old Consumer Number: 53000012442



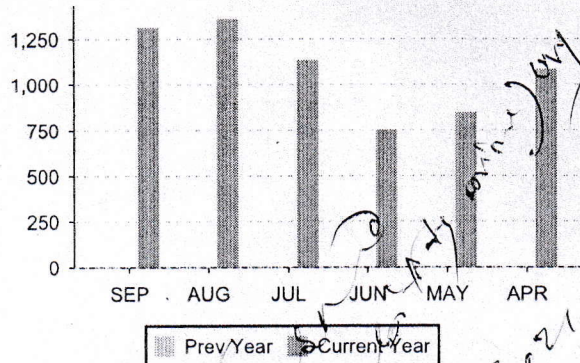
Meter Reading Details

Rate	NORMAL	AP10003428	MF 1	Previous Reading in KWh	6108	Current Reading in Kwh	7449	Difference in kWh	1341				
NA	NA	0	0	0	0	0	0	0.00	0.00				
Units Consumed	NA	PF Penalty (Rebate)	LT Metering Penalty @3%	0	DTR Penalty @10%	0	HT Rebate @3%	0	Billable Units in kWh	0.00			
Recorded Demand (in KVA)	1341	27	Maximum Demand (in KVA)	0	Billing Demand (in KVA)	0	Average Power Factor	1314					
Power Cycles			Availability Percentage										
Billing Details	0	0	0	0	11.76	96							
Current Demand in ₹	0	Outstanding Amount in ₹	0	Adjustment Amount in ₹	0	Government Subsidy in ₹	0	Solar Rebate in ₹	0	Payable Amount in (on/before due date)	11369	Net Bill Amount in ₹ payable after due date	0

11251.74

74.4 11369 11369

In words: Rupees eleven thousand three hundred sixty nine Only



Allowed Rs 11369 / eleven thousand three hundred and 69 only
21/09/2021

Prepared by: OUT_KAIL

Charges Breakup

Details	Units	Rate	Amount
Energy Charge	1314	7.2	9460.8
Energy Charge Reestimated	0	0	0
Demand/Fixed Charge	10	130	1326
FPPPA Charge	1314	0	0
Electricity Duty			539.34
Government Subsidy			74.4
Meter Rent			0
Transformer M&D Charge			0
Overdrawal Penalty			0
Adjustment of Load Security Interest			0
Charges for Dishonoured Cheque			0
Total Current Bill			11251.74
Arrear Principal			0.0
Arrear Surcharge			0.0
Current Surcharge			117.26
Misc Arrear			0
Rebate (if paid on/before due date)			0

Checked by E&OE

Prepared By:

Authorised Signatory

This is to Certify that the Management System of
ENVIRO TESTING SERVICES

**BIJAY NAGAR, NOONMATI, GUWAHATI - 781020,
ASSAM, INDIA**

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope of operations:

**ENVIRONMENTAL ASSESSMENT, MANAGEMENT AND
MONITORING FOR SOIL, WATER, AIR, FLORA
AND FAUNA.**

Certificate No.: 09110783A

<u>Date of initial registration</u>	<u>Date of this Certificate</u>	<u>Surv. audit on or before/ Certificate expiry</u>	<u>Recertification Due</u>
24 August 2022	24 August 2022	23 August 2023	23 August 2025

Accreditation

This Certificate remains valid subject to satisfactory surveillance audits.



ICL/FM-001/REV06



Director



For verification and updated information concerning the present certificate visit to www.iclcert.com

This certificate is property of Integral Certification (P) Ltd. and shall be returned immediately when demanded.

Integral Certification (P) Ltd.
301, U-60 (3rd Floor), Shakar Pur, Laxmi Nagar, Delhi-110092
E-mail: info@iclcert.com Website : www.iclcert.com
Contact No. : +91-9319332223



Certificate

This is to Certify that

ENVIRO TESTING SERVICES

**Bijay Nagar, Noonmati, Guwahati - 781020,
Assam, India**

has been found in Compliance with requirements of
Occupational Health and Safety Management Systems

ISO 45001:2018

for the following scope:

**Environment Work Deals With Testing of Soil,
Water and Air.**

Certificate No. : OHSMS/025225/1221
Original Certificate Date : 08-December-2021
Issue Date : 08-December-2021
Expiry Date : 07-December-2024

Authorised Signature

Quality Control Certification

UK Office: 1929, Chynoweth House,
Trevisson Park, Truro-TR48UN, Cornwall, UK

India Office: 2nd Floor, Aman Market,
Narela Mandi, Delhi - 110 040, India

To check this certificate status visit:
“<http://uasl.uk.com/certifiedorganization.html>”





Pollution Control Board, Assam

(Department of Environment & Forests : : Government of Assam)

অসম প্ৰদূষণ নিয়ন্ত্ৰণ পৰিষদ

(অসম চৰকাৰৰ বন আৰু পৰিৱেশ বিভাগ)



No.WB/GUW/T-2445/13-14/198

Dated Guwahati the 19th Feb 2022

OFFICE ORDER

In exercise of the powers conferred under section 17(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 17(2) of the Air (Prevention & Control of Pollution) Act, 1981, the Pollution Control Board, Assam is pleased to renew the recognition of the Laboratory for One (1) year subject to the outcome of Hon'ble Guwahati High Court Order WP(C)/8468/2018 to **M/s. Enviro Testing Services, Bijoy Nagar, House No.35, Noonmati, Guwahati-22, Kamrup (M), Assam** awarded vide Pollution Control Board, Assam order No. WB/GUW/T-2445/13-14/197 dtd.19.02.2022. This Renewal of recognition is awarded subject to the following terms & conditions for the purpose of analyzing certain parameters discharged from the industries or any other institutions.

Terms & Conditions:

1. The recognition may be revoked or withdrawn subject to the violation of the following conditions :-
 - i. The laboratory shall carry out analysis only for the parameters authorized by the Board as mentioned in the certificate of approval.
 - ii. The laboratory shall carry out analysis of samples as per IS, APHA code of Federal Regulation and should specify the method in the analysis report.
 - iii. The laboratory will keep a proper record of receipt of samples, the reading of each and every parameter analyzed and calculation of results of all parameters on permanent register and will subject to inspect by the Board.
 - iv. The samples collected should be analyzed within seven (7) days from the date of collection and copy of the same along with the brief inspection report to be sent to Pollution Control Board, Assam.
 - v. The accredited laboratory will collect samples as required by the process, which will be divided in two parts. One part will be analyzed, while the other part will be preserved for thirty days. For air samples, the used thimbles and filter papers will be preserved for six(6) months so that the Board can check randomly and verify the credibility.
 - vi. The Board officials may visit laboratory for checking preserved samples at random.
 - vii. The Laboratory must submit information on whether ETPs/APCDs installed by the respective unit was running or not along with test report. At the time of collection samples by the Laboratory, all the processes of the unit should invariably be running. The analysis report should generally reflect site conditions and capacity at which the industry was running at the time of sampling.
 - viii. Records pertaining to inventory of the chemicals/ reagents shall be kept properly on a permanent register and will be subject to inspection by the Board.
 - ix. Laboratory will submit details of staff involved in sampling and testing and the person coming for collection of sample should have authority letter of Laboratory.
 - x. Any change in address, staff or other additions/ alterations in the facilities of the laboratory should immediately be reported to this office within fifteen (15) days.

Contd....p/2



Pollution Control Board, Assam

(Department of Environment & Forests :: Government of Assam)

অসম প্রদূষণ নিয়ন্ত্রণ পৰিষদ
(অসম চৰকাৰৰ বন আৰু পৰিৱেশ বিভাগ)



- xi. Prior information is to be given to the concerned Regional Officers and Head Office for collection of sample and Regional Officers/Field Officer will associate during the sampling.
 - xii. The approval shall be suspended or cancelled if the Board has reason to believe that the data reported by the Laboratory is repeatedly erroneous. Further the Laboratory and its key personnel shall be liable to be proceeded against for imposition of penalty in case the Board has reason to believe that the data reported by the Laboratory is intentionally manipulated.
 - xiii. If it is found that the aforementioned Laboratory has any involvement with any of the industry against whom allegations have been made forging of Board's Authority, will result in withdrawal of recognition apart from other legal proceeding as provided under existing laws.
 - xiv. If the laboratory failed to achieve the satisfactory performance regarding testing of the coded samples supplied by the Pollution Control Board, Assam will result in withdrawal of recognition.
 - xv. The instruments/equipment should be always kept in working and perfectly calibrated condition.
 - xvi. The Laboratory has to submit a brief plan on safety measures undertaken for risk management pertaining to the work environment.
 - xvii. In legal matters, the analytical reports of the above laboratories will not be binding to the Board and such reports generated by the State Board will always prevail over.
 - xviii. Regarding compliance of occupiers, Boards analytical report and opinion will stand final over the reports and opinion of the aforesaid laboratory.
 - xix. Board will have every right to accept or reject the analytical and other reports submitted by the aforesaid laboratory without assigning any reason thereof.
 - xx. National Accreditation Board for Testing and Calibration Laboratories (NABL) is mandatory at the time of Next renewal of recognition i.e from the year 2023 onward.
2. This order will remain valid for **one (1) year with effect from 20 Feb, 2022** subject to the outcome of Hon'ble Gauhati High Court Order in WP(C)/8468/2018. But the said recognition may also be withdrawn at any time in case of violation of any of the aforementioned conditions or any of the conditions mentioned in **Annexure-A(i) & (ii)** or for any other unlawful activities, which are not proper under the law of the land.
3. This order has been passed as per the approval of the Competent Authority.

Member Secretary

Dated Guwahati the 19th Feb 2022

Memo No. WB/GUW/T-2445/13-14/198-A

Copy to:

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1. The Chairman, Pollution Control Board, Assam for favour of information.
2. The Incharge, Central Laboratory, PCBA for information & necessary action.
3. M/s. Enviro Testing Services, Bijoy Nagar, House No.35, Noonmati, Guwahati-22, Kamrup (M) for information and necessary action.

Member Secretary



उद्योग आधार



Udyog Aadhaar

D

Type of Enterprise	Micro	Small	Medium
Manufacturing	A	B	C
Services	D	E	F
UAN	AS03D0000207		
GM-DIC - KAMRUP METROPOLITAN			

Udyog Aadhaar Memorandum

- 1 Name of Entrepreneur SATYA NATH GOSWAMI
 2 Social Category GENERAL
 3 Name of Enterprise ENVIRO - TESTING SERVICES
 4 Type of Organization
 5 Postal Address H. NO. 35, BIJAY NAGAR, NOONMATI, GUWAHATI - 781020, ASSAM.
 District KAMRUP METROPOLITAN State ASSAM PIN 781020
 Mobile No: 9435707936 Email: envirotesting2011@gmail.com
 6 Date of commencement 15/12/2001
 7 Previous Registration details-if any ::
 8 Bank Details IFS Code SBIN0006196
 Bank Account: 30368995867
 9 Major Activity SERVICES
- | SN | NIC 2 Digit | NIC 4 Digit | NIC 5 Digit Code | Activity Type |
|----|--|---------------------------------------|--|---------------|
| 11 | 71 - Architecture and engineering activities; technical testing and analysis | 7120 - Technical testing and analysis | 71200 - Technical testing and analysis | Services |
- 11 Persons employed 10
 12 Investment (Plant & Machinery / Equipment's) 10(Rs. In Lakhs)
 13 District Industry Centre KAMRUP METROPOLITAN

Declaration

I hereby declare that information given above is true to the best of my knowledge. Any information, that may be required to be verified, shall be provided immediately before the concerned authority.



[Click here for Udyog Aadhaar Acknowledgement](#)