

# GREEN AUDIT REPORT

## 2020-2021



INTERNAL QUALITY ASSURANCE CELL  
(IQAC)

**BERHAMPORE COLLEGE**

**BERHAMPORE, MURSHIDABAD**



## **INTRODUCTION:**

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. 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 prevalent. 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 CO<sub>2</sub> 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.

## **OBJECTIVES:**

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. 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. 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 Berhampore where college is situated
- ✓ To document the ambient environmental condition of weather, air, water and noise of the college
- ✓ To document the waste disposal system
- ✓ To estimate the Energy requirements of the college.

## METHODOLOGY:

The purpose of the green audit of Berhampore College 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.

### Audit Period

This external Audit has been done on the basis of the Reports submitted by the various sub-committees, availability of data from office and IQAC and interaction with the functioning bodies and stakeholders of the college for the period 2020-21.

### Audit Team

The team consisted of -

1. Dr. Sucheta Mukherjee, Assistant Professor in Botany, Jiagunj Sripat Singh College
2. Dr. Rousham Islam, Assistant Professor in Geography, Jiagunj Sripat Singh College



## **ABOUT THE COLLEGE:**

BERHAMPORE COLLEGE (so re-named in 1975) was established (2nd August, 1963) initially as Raja Krishnath College of Commerce to cater Commerce Education. In 1971, realising the increasing demands of diversified education, the then college introduced Humanities with necessary approval from the University of Calcutta and the Government of West Bengal. At first only pass subjects of Humanities were approved. From then on Berhampore College started functioning as a full fledged college for Arts and Commerce. But the College would not have been set up at all had there been no concerted efforts of the renowned Educationists like Dr. Ram Chandra Pal (the then Principal of Krishnath College), Late Promatha Nath Sengupta and other eminent personalities of Berhampore. Initially classes were held in the premises of Krishnath College in the evening. But thanks to all out efforts of all, the college was shifted to its present site in 1970. Eventually, Honours in Bengali, English, Philosophy, History, Political Science, Economics, Mathematics Geography and Sanskrit were approved by the affiliating University. Film Studies (self financing) and Statistics (self financing) as Pass subjects are being taught at the Degree level. At present 5890 students are being provided with the scope for higher education at this Seat of Learning. The college authority always keeps a vigilant look into the all round growth and development of its students. To realise its dream, the college authority has setup a multi-gym with financial assistance from the Ministry of Youth Affairs, Govt. of India. Moreover the N.S.S. Wing of the college is engaged in various co-curricular activities which instil in the students a sense of responsibility and feeling for others. Along with these ,the college authority in collaboration with the students' union, organises debates , seminars, symposia, sports and other cultural functions for the all round development of the students. The NAAC peer team had highly appreciated the over-all performances of the college and accredited the college with the status "B" in 2007.



## **Vision**

To evolve skilled and value based resource professional, to provide opportunities to the students without any discrimination, to find space for the exponential growth of personality and character and to face the challenges of tomorrow successfully through quality education.

## **Mission**

In the quest towards achievements of its vision, the Berhampore College is committed to provide higher education to the students in its vicinity giving equal opportunities to all; endowing the student community with academic, social, scientific and spiritual values and enabling them to have an insight into the spirit of transparent governance and public. We are well aware of our responsibility towards our students and do our very best to provide a friendly and growth-oriented ambiance for them. Our sincerest efforts are oriented towards ensuring excellent standards that would secure them leadership roles in tomorrow's challenging world. The vision behind the establishment of the college is to spread the light of knowledge and wisdom to kindle the ardour of faith. The faculty does justice to these goals by shaping a new generation of men and women who are:

1. Academically accomplished
2. Emotionally balanced
3. Morally upright
4. Socially responsible
5. Ecologically sensitive
6. Professionally dedicated.

## **GREEN AUDITING:**

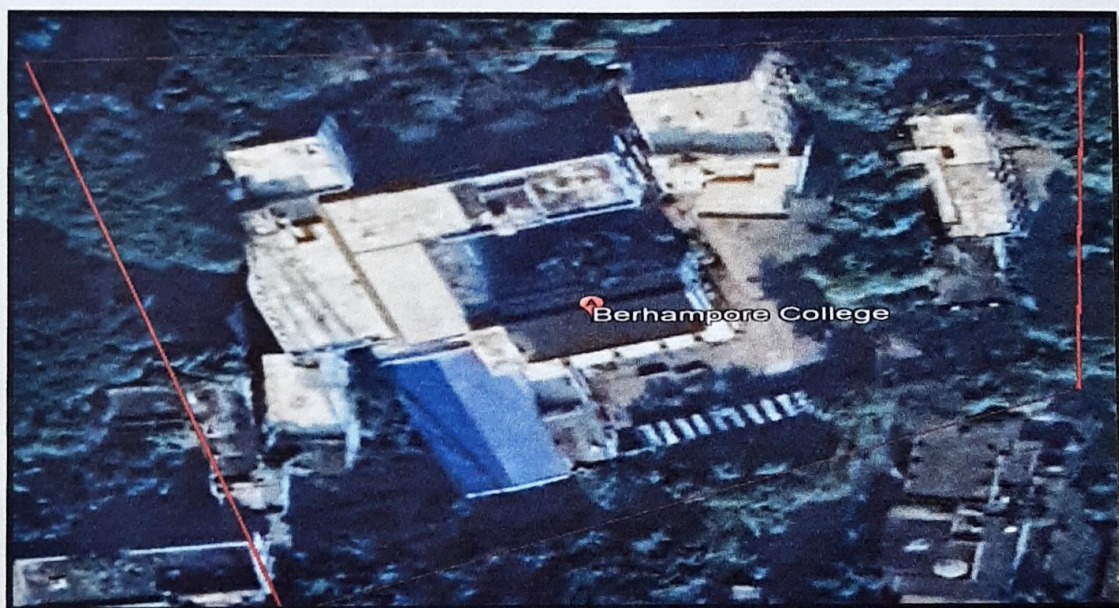
The college has adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The



goal is to reduce CO<sub>2</sub> emission, energy and water use, while creating atmosphere where students can learn and be healthy.

### **GEOGRAPHICAL LOCATION OF THE COLLEGE:**

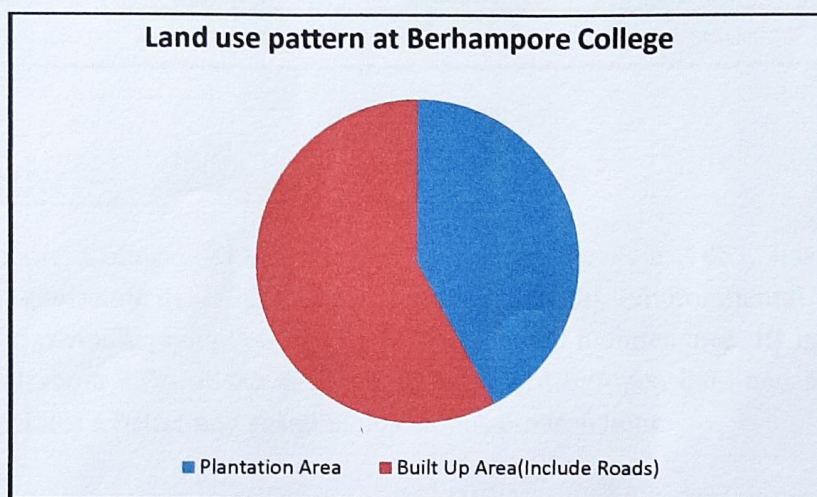
The college has a 5000 square feet campus in the heart of the City Berhampore. The Location of the college is in 24° 05.502'N and 088° 15.434' E coordinate. Green colour in Map is representing green area.





### Land Use Data

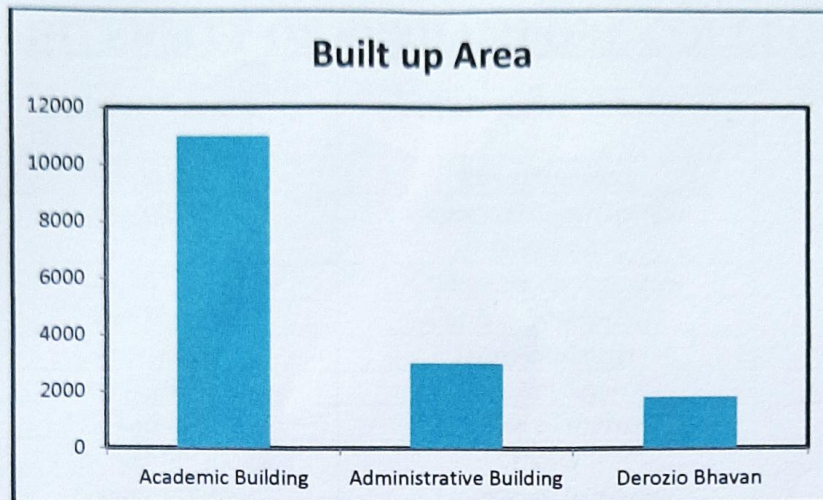
Categories of Land Use	Area(m <sup>2</sup> )
Plantation Area	2100 ft <sup>2</sup>
Built Up Area(Include Roads)	2900 ft <sup>2</sup>
Total Area	5000 ft <sup>2</sup>



### Area occupied by various buildings:-

SL No	Name of Building	Number of Floors	Area(m <sup>2</sup> )
1	Academic Building	3	11000 ft <sup>2</sup>
2	Administrative Building	4	3000 ft <sup>2</sup>
3	Derozio Bhavan	4	1800 ft <sup>2</sup>





### **FINDINGS:**

Berhampore College, which was established in the year 1963, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that about 42% of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.



## TREE DIVERSITY OF BERHAMPORE COLLEGE

SL NO	COMMON NAME	SCIENTIFIC NAME	NUMBER OF TREES
1.	White Rose	<i>Rosa chinensis</i>	2
2.	Lemon Cypress	<i>Cupressus macrocarpa golderest</i>	8
3.	Garden Croton	<i>Codiaeum variegatum</i>	8
4.	False Heather	<i>Cuphea hyssopifolia</i>	64
5.	Chinese Ixora	<i>Ixora chinensis</i>	88
6.	Salvia Splendens	<i>Scarlet sage</i>	2
7.	Euphorbia milii	<i>Crown of thorns</i>	16
8.	Tabernanthe iboga	<i>Iboga</i>	2
9.	Glossy private	<i>Ligustrum lucidum</i>	2
10.	Strelizia Nicolai	<i>Strelizia Nicolai</i>	3
11.	Ti	<i>Cordyline Fruticosa</i>	12
12.	Aegle marmelos	<i>Indian bael</i>	1
13.	Mango	<i>Mangifera indica</i>	4
14.	Guava	<i>Common Guava</i>	1
15.	Bridged Hibiscus	<i>Hibiscus</i>	2
16.	Red Rose	<i>Rosa chinensis</i>	4
17.	Cordyline Plant	<i>Cordyline</i>	6
18.	Night Blooming Jasmine	<i>Cestrum nocturnum</i>	1
19.	Campo manesia	<i>Campo manesia</i>	2
20.	Thevetia Peruviana	<i>Thevetia peruviana</i>	1
21.	Chinese Ixoro	<i>Ixoro coccinea</i>	1
22.	Marry Gold	<i>Genus tagetes</i>	2
23.	Balsam	<i>Impatiens balsamina</i>	1
24.	Vallaris	<i>Vallaris glabra</i>	3
25.	Bougainvillea	<i>Bougainvillea spectabilis</i>	3
26.	Mugwort	<i>Artemisia vulgaris</i>	5
27.	Ravenala madagascariensis	<i>Ravenala madagascariensis</i>	3
28.	Sealytha hispida	<i>Sealytha hispide</i>	1
29.	Florist Kalanchoe	<i>Kalanchoe blossfeldiana</i>	3
30.	Barleria Lupulina	<i>Barleria lupulina</i>	3
31.	Aglaia Odorata	<i>Aglaia odorata</i>	4
32.	Trumpet Vine	<i>Compsis radicans</i>	1
33.	Withania	<i>Withania</i>	2
34.	Lemon Beebrush	<i>Lemon beebrush</i>	2
35.	Dragon Trees	<i>Dracaena draco</i>	1
36.	Persian Silk Trees	<i>Albizia julibrissian</i>	2
37.	Monoon Longifolium	<i>Polyatihioa longifolia</i>	14
38.	Strelitzia Nicolai	<i>Strelizia</i>	3
39.	Lemon Croton	<i>Codacum variegatum</i>	2
40.	Rangoon Creeper	<i>Hiptage benghalensis</i>	4



41.	Peltophorum Peterocarpum	<i>Peltophorum Peterocarpum</i>	1
42.	Sparich Cherry	<i>Mimusops elengi</i>	1
43.	Northern Black Wattle	<i>Acacia auriculiformis</i>	1
44.	Bauhinia Seuminata	<i>Bauhinia Seuminata</i>	2
45.	Melie azedarach	<i>Milie azearach</i>	1
46.	Eonpress Tree	<i>Paulownia tomentosa</i>	2
47.	Neeon Tree	<i>Azadirachta indica</i>	1
48.	Mango Tree	<i>Mangitera indica</i>	4
49.	Burflower Tree, Kadam	<i>Anthocepholus indicas</i>	1
50.	Banyan Tree	<i>Ficus benghalensis</i>	3
51.	Lemon Plants	<i>Citrus limon plant</i>	1
52.	Tamarnd Plants	<i>Tamarindus indica</i>	1
53.	Black Willow	<i>Salix nigra marchal</i>	1
54.	River Tamarnd	<i>Leucaena leucocephala</i>	1
55.	Ficus rumphii	<i>Ficus rumphii</i>	3
56.	Shala Tree	<i>Shorea robusta</i>	3
57.	Pomelo Tree	<i>Citrus maxima</i>	1
58.	Arica Pum tree	<i>Duipsis lutescens</i>	15
59.	Jujube Chinese date	<i>Zizithus zizyphus</i>	1
60.	Gardenia	<i>Cape jasmine</i>	1
61.	Garden Croton	<i>Codineum vwiegntum</i>	1
62.	Tabacco Plant	<i>Nicotiuma tabacum</i>	2
63.	Caladium (Heart of jesus)	<i>Caladium</i>	1
64.	Kratom	<i>Mitragyna speciose</i>	1
65.	Panama Rose	<i>Rondeletia leucophylla</i>	10
66.	Sandhya Malati	<i>Mirabilis jalapa</i>	3
67.	Pareskia	<i>Pareskia aculeate</i>	22
68.	Areca Plam	<i>Dypsis lutescens</i>	1
69.	Synsepalum	<i>Synsepalum</i>	8
70.	Duranta Erecta	<i>Duranta repens</i>	25
71.	Dracaena angas tifolia	<i>Dracaena angas tifolia</i>	1
72.	Crown of Thrown	<i>Euphorbia milii</i>	2
73.	Drogon Tree	<i>Dracaena draco</i>	1
74.	Aloe vera	<i>Aleo vera</i>	1
75.	Thuja	<i>Thuja</i>	4
76.	Pragrina	<i>Jatropha integerrima</i>	5
77.	Limmoma/Pink Rovema	<i>Limonia acedissima</i>	4
78.	Crape saemine	<i>Tabernaemontana divaricata</i>	48





Photo 1: Main Entry of College Campus

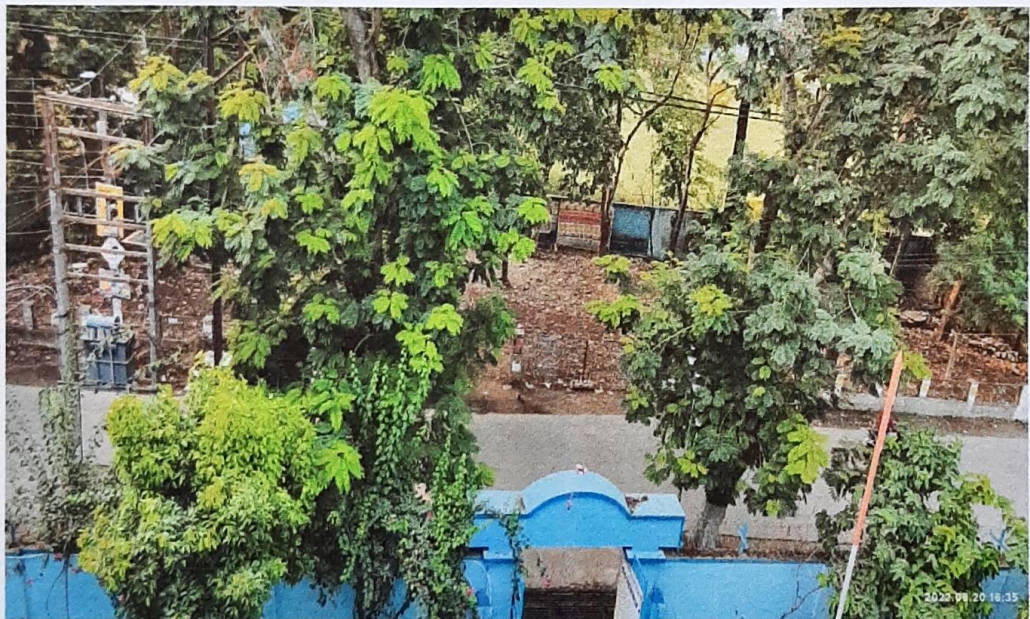


Photo 2: Main Entry of College Campus





Photo 3: College Garden



Photo: 4



Photo: 5





Photo: 6



Photo: 7



Photo 8: College Ground



Photo: 9



Photos: 10



## WEATHER DATA OF BERHAMPORE CITY AND BERHAMPORE COLLEGE

Berhampore are in the middle and the summers are that easy to define. The best time to visit is March, October, November. The month with the highest relative humidity is September (84.86 %). The month with the lowest relative humidity is March (50.29 %). The month with the highest number of rainy days is July (27.77 days). The month with the lowest number of rainy days is December (1.07 days). Berhampore's climate is classified as warm and temperate. The summers here have a good deal of rainfall, while the winters have very little. The climate here is classified as Cwa by the Köppen-Geiger system. The average annual temperature in Berhampore is 25.5 °C | 77.9 °F. The rainfall here is around 1595 mm | 62.8 inch per year.

### **WEATHER BY MONTH // WEATHER AVERAGES BERHAMPORE**

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	17.8 °C (64.1) °F	21.4 °C (70.5) °F	26.2 °C (79.2) °F	29.4 °C (84.9) °F	29.6 °C (85.3) °F	29.2 °C (84.6) °F	28.1 °C (82.6) °F	28.1 °C (82.6) °F	27.7 °C (81.8) °F	26.2 °C (79.1) °F	22.7 °C (72.9) °F	19.2 °C (66.6) °F
Min. Temperature °C (°F)	11.9 °C (53.4) °F	15 °C (59.1) °F	19.5 °C (67.1) °F	23.9 °C (75) °F	25.5 °C (77.9) °F	26.3 °C (79.4) °F	25.9 °C (78.6) °F	25.6 °C (78.4) °F	25.1 °C (77.2) °F	22.6 °C (72.7) °F	17.7 °C (63.9) °F	13.8 °C (56.8) °F
Max. Temperature °C (°F)	23.7 °C (74.7) °F	27.6 °C (81.7) °F	32.6 °C (91) °F	35.6 °C (96.1) °F	34.6 °C (94.2) °F	33 °C (91.4) °F	31.4 °C (88.5) °F	31.3 °C (88.4) °F	31.1 °C (88) °F	30.2 °C (86.3) °F	28 °C (82.4) °F	24.8 °C (76.7) °F
Precipitation / Rainfall	11	22	31	66	183	291	326	273	253	111	16	10
mm (in)	(0)	(0)	(1)	(2)	(7)	(11)	(12)	(10)	(9)	(4)	(0)	(0)
Humidity(%)	67%	80%	50%	57%	71%	80%	85%	85%	85%	80%	69%	67%
Rainy days (d)	2	2	3	7	13	17	21	20	17	8	1	1
avg. Sun hours (hours)	8.9	9.6	10.1	9.4	8.3	8.1	7.7	7.7	7.6	8.5	8.9	8.5

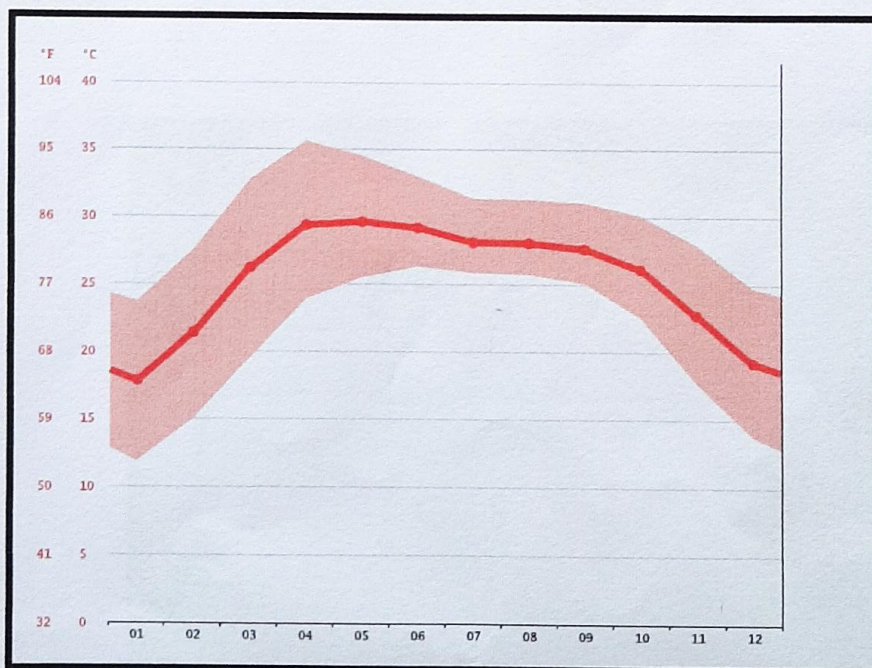
**SOURCE-CLIMATE-DATA.ORG**



## CLIMATE GRAPH // WEATHER BY MONTH BERHAMPORE



## AVERAGE TEMPERATURE BERHAMPORE





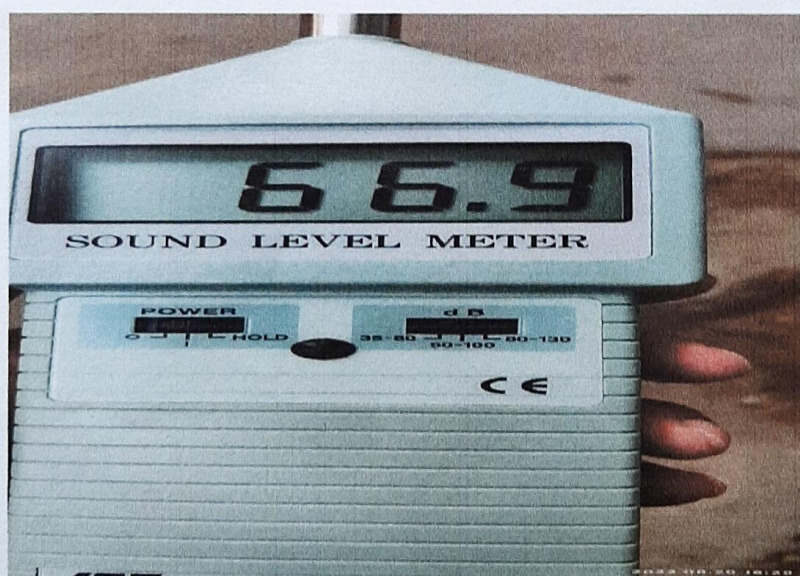
### Quality Assessment of soil at Berhampore College

SOIL PROPERTIES	VALUE
pH	8.5 (Strongly Alkaline)
Nitrate Nitrogen	45 Lbs/acre (High)
Ammoniacal Nitrogen	13Lbs/acre (Low)
Potassium	250 to 350 lbs/acre (High)
Phosphate	20 to 50lbs/acre (Medium)

*Source- Lab Report, Department of Geography, Berhampore College*

### NOISE LEVEL TEST

Highest	72 dB
Average	66 dB
Lowest	52 dB





**Expenditure on Green Initiatives during the Last Five Years:**

<b>Financial Year</b>	<b>Tree Plantation ( Amount in Rs)</b>	<b>Purchase of LED's</b>	<b>Total</b>
2018-19	26,120	8,222	34,342
2017-18	24,240	93,257	117,497
2016-17	21,630	12,110	33,740
2015-16	18,550	13,980	32,530
2014-15	16,460	15,200	31,660



## **Conclusion and Recommendations of Green Audit**

Conclusion and recommendations Green Audit are the most efficient way to identify the strength and weakness of environmentally sustainable practices and to find a way to solve problem. Green Audit is one kind of professional approach towards a responsible way in utilising economic, financial, social and environmental resources. Green audits can “add value” to the management approaches being taken by the college and is a way of identifying, evaluating and managing environmental risks (known and unknown). There is scope for further improvement, particularly in relation to waste, energy and water management. The college in recent years consider the environmental impacts of most of its actions and makes a concerted effort to act in an environmentally responsible manner. Even though the college does perform fairly well, the recommendations in this report highlight many ways in which the college can work to improve its actions and become a more sustainable institution.

## **Suggestions**

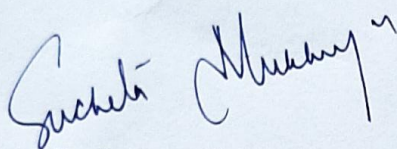
Some of the very important suggestions are:-

- a) Adopt the proposed Environmentally Responsible Purchasing Policy, and work towards creating and implementing a strategy to reduce the environmental impact of its purchasing decisions.
- b) Increase recycling education on campus.
- c) Increase Awareness of Environmentally Sustainable Development- Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.
- d) Educate for Environmentally Responsible Citizenship- Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all university graduates are environmentally literate and have the awareness and understanding to be ecologically responsible citizens
- e) Involve All Stakeholders- Encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development.



## Recommendations

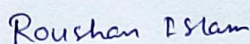
- Installation Biogas plant and Compost units.
- Installation of Solar panels to generate electricity .
- Grow up vegetable garden and medicinal garden and gradually develop it as a nursery.
- Display boards of fauna diversity to generate enthusiasm for learners.
- Conduct exhibitions for parents and public on environment and sustainable practices.
- Adopt an environment policy for the college.
- Establish an E-waste collection centre in campus.



**Dr. Sucheta Mukherjee,**

**Assistant Professor in Geography,**

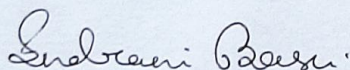
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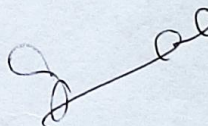
**Jiagunj Sripat Singh College**



**Dr. Indrani Basu**

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**Dr. Samaresh Mandal**

**Principal**

**Berhampore College**

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