Green Initiative Report

&

Internal Green Audit/Environmental Audit: 2018-2023

Prepared by

POLBA MAHAVIDYALAYA

POLBA, HOOGHLY, WEST BENGAL, INDIA

Affiliated to the University of Burdwan

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POLBA MAHAVIDYALAYA

LOCATION AND ITS SURROUNDING

GEOGRAPHICAL LOCATION: 22.96 DEGREE NORTH, 88.30DEGREE EAST

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Preface

In an era where environmental sustainability has become a pressing global concern, educational institutions play a pivotal role in fostering awareness and promoting eco-friendly practices. Polba Mahavidyalaya, established in 2005 in the heart of Hoogly, West Bengal, stands as a beacon of knowledge and learning. However, as we navigate the complexities of climate change and environmental degradation, it is imperative that we assess our ecological footprint and implement strategies for sustainable development. This green audit aims to evaluate the environmental practices of Polba Mahavidyalaya, identifying areas of strength and opportunities for improvement. By conducting a thorough analysis of our resource consumption, waste management, and energy efficiency, we seek to create a comprehensive understanding of our current environmental impact. The findings of this audit will not only serve as a benchmark for our institution but will also guide us in formulating actionable strategies to enhance our sustainability efforts. The commitment to a greener future is not merely an institutional responsibility; it is a collective endeavour that involves students, faculty, and the surrounding community. Through this audit, we aspire to inspire a culture of environmental stewardship within our campus, encouraging all stakeholders to engage in practices that promote ecological balance and conservation. As we embark on this journey towards sustainability, we invite all members of the Polba Mahavidyalaya community to participate actively in this initiative. Together, we can pave the way for a more sustainable future, ensuring that our institution not only imparts knowledge but also embodies the principles of environmental responsibility.

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Acknowledgement

We are obliged to pay a debt of gratitude to Sri Narugopal Kaibarta, our teacher-in-charge, for his kind assistance and direction in the creation of this report. We appreciate the cooperation and assistance of all members of the teaching and support staff, as well as our students, in the preparation of this report. Without the extensive assistance of IQAC and NSS, this report would not have been possible. We are incredibly appreciative of Dr. Santanu Sengupta's thoughtful assistance. We also appreciate the support and sharing of the information needed to prepare this report from the heads of each department.

Environmental Sustainability Strategy Committee

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Assertion

We hereby declare that, to the best of our knowledge, all facts and figures used in the preparation of this report are accurate. This report is based on information that has been made available by a number of our college's departments, units, and practices, as well as data collected by the members of the Green Audit Preparation Committee.

Environmental Sustainability Strategy Committee

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Introduction: To live a healthy life, one needs a clean, healthy atmosphere. It is an institution's duty to give employees and students a clean, better environment for improved health and performance. The majority of students' time is spent on campus, so maintaining a clean and orderly campus is essential. A key step in this approach is the Green Audit project. It facilitates decision-making related to waste reduction, resource management, and sustainable development. By implementing the sustainable and environmentally friendly best practices suggested in this report, we can keep our campus green. In order to make our campus more ecologically friendly and energy-efficient for future generations, this study fills in the gaps.

Goal: Improving the campus and adjacent areas' environments for healthy living is the primary goal of the environment audit. The following are the primary goals of the Green audit:

1. To make certain that resources are used more wisely and sustainably.

2. To check if environmental rules are being followed.

3. To preserve energy and resources in order to reduce waste, pollution, and expenses.

4. To learn how to use other resources to promote sustainability.

5. To make better suggestions for achieving an environmentally friendly setting.

6. To improve and create a healthy environment for both the current and upcoming generations.

Methodology: Data from both direct and indirect sources form the basis of the current investigation. Data from structured questionnaires, observations, inspections, surveys, reviews of documentation, and other methods are among the direct sources of information. Secondary data from government and non-government websites is one example of an indirect source of data. The study's main focal areas include waste management, general practices, energy, greenery, and water conservation.

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1. GENERAL INFORMATION

1.1 Year of Establishment of College: 2005
1.2 History behind the establishment of the college:

Polba Mahavidyalaya was established on September 19, 2005, to popularize higher education in areas that had previously been underserved. The institution was affiliated with the University of Burdwan, and its inception included the founding of the Department of History, which has been operational since the college's establishment. The founder envisioned enhancing educational opportunities for the local community.
1.3 Total campus area: 17563.36 sq. meter (4.34 Acre)
1.4 Total built up area: 6861 sq. meter
1.5 Total open space area: 3282.01 sq. meter
1.6 Total green area: 7141.11 sq. meter
1.7 Whether the college is implementing the Green Policy for the first time: **"yes", "no" and "not applicable"**
(Mention date/month/year) : **27.11.2018**
1.8 Whether green audit is followed annually, if so, please produce the year-wise recommendations of the auditor along with report (as Annexure): **"yes", "no" and "not applicable" No**
1.9 Whether college has constituted the "College Environmental Committee", **"yes", "no" and "not applicable"**
(if so, give the details of it) : Yes
1.9.1 Name of the Committee members
1. Sri Narugopal Kaibarta Teacher-In -Charge (Chairperson)
2. Sri Rajesh Das Assistant Professor of Geography (Convener)
3. Dr. Abira Banerjee, Assistant Professor of Botany (Jt. Convener)
4. Dr. Sharmistha Dutta Gupta, Associate Professor of Philosophy (Member)
5. Sri Milan Kisku, Assistant Professor of Political Science (Member)
6. Sri Munna Thakur, Assistant Professor of Political Science (Member)
7. Sri Biswajit Dhara, SACT, Geography (Member)
8. Smt. Tulika Ghosh, SACT, Botany (Member)
9. Sri Soumya Sinha Roy, SACT, Chemistry (Member)
10. Sri Biswanath Dhara, Group C staff (Member)
11. Sri Debu Mallav, Group D staff (Member)

1.9.2 Number of meetings conducted so far: 19
1.9.3 Resolution of the meetings: See the Annexure I
1.9.4 Action taken by the Committee: See the Annexure II
1.9.5 Future programmes of the Committee:
The committee is committed to maintaining the Green campus along with efficient energy management system, pure drinking water, and clean campus with proper management of waste. The committee is willing to convert the campus into a fully 'No Plastic' use campus banning any kind of plastic and also to accelerate the use of green energy to minimize the cost and pollution.
1.9.6 Policy enforcement strategies
Following Policy enforcement strategy have been adopted by the committee:
The enforcement of policies aimed at creating a green and clean campus requires a multifaceted approach. By implementing comprehensive education programs, incentivizing sustainable practices, and establishing strict waste management protocols, educational institutions can cultivate an environment that promotes ecological responsibility. As stewards of the future, it is imperative that students and staff work together to create a sustainable campus that reflects their commitment to the

planet. Through these strategies, we can ensure that our campuses not only serve as centers of learning but also as models of environmental stewardship.

Workshops, seminars, and interactive sessions can be organized to inform students about the importance of sustainability and the specific policies in place. For instance, integrating sustainability into the curriculum can help students understand the implications of their actions on the environment. By fostering a culture of awareness, institutions can encourage students to take ownership of their campus environment.

By offering rewards for eco-friendly behaviors, such as using reusable containers, participating in recycling programs, or utilizing public transportation, campuses can motivate students and staff to adopt greener habits. For example, a points system could be established where individuals earn points for sustainable actions, which can be redeemed for discounts at campus facilities or local businesses. This not only promotes participation but also creates a community that values sustainability.

Implementing strict waste management protocols is crucial for maintaining a clean campus. This includes clearly labeled recycling and composting bins, regular waste audits, and penalties for non-compliance. By making waste disposal easy and accessible, institutions can reduce contamination and increase recycling rates. Additionally, organizing regular clean-up drives can engage the campus community in hands-on efforts to maintain cleanliness. Such initiatives not only improve the campus environment but also reinforce the importance of responsible waste management.

1.10 Whether college has conducted any awareness/responsibility programme among the staff members: **"yes", "no" and "not applicable": Yes**
1.11 Whether all the departments/teachers/non-teaching members/students are aware about the need of the environmental protection and audit: **"yes", "no" and "not applicable": Yes**
1.12 Whether college has involved the students as volunteers in greening programmes: **"yes", "no" and "not applicable": Yes**
1.13 Whether construction/demolition/repairing are in compliances with green standard:
"yes", "no" and "not applicable": Yes
1.14 Whether college has conducted any workshop/seminar/lecture on environmental awareness programme inside and/or outside the campus: **"yes", "no" and "not applicable": Yes**
1.15Whether the institute has department of Law/Environmental Science/3-Year degree Course/Course curriculum
"yes", "no" and "not applicable": No
(if so, how does it takes part in greening programmes)
1.16 Whether college provides any community services, if so, give details (as Annexure): **"yes", "no" and "not applicable": Yes (See the Annexure II)**
1.17 Whether the students are aware about the use of medicinal plants (any lecture/seminar/conference organized on it): **"yes", "no" and "not applicable": Yes**
1.18 Comments on the following:
1.18.1 Plantation program: Y / N : Y
1.18.2 Formation of Natural club/Eco club: Y / N : Y
1.18.3 Management of natural resources, wildlife, conservation of species: Y / N : Y
1.18.4 Any project sponsored by national funding agency/NGO, independent project related to environmental issues: Y / N: N

1.18.5 Is there any incidence of burning of plastics containing garbage within the campus for necessary reduction: Y / N : N

1.18.6 Celebration of 5th June, Ozone day, Earth Day etc.: Y / N : Y (See the Annexure II)

1.18.7 Number of field visits/survey records: Y / N (if Y number): Y (See the Annexure II)

1.18.8 Campus biodiversity register : Yes

1.19 General aspects (express in statements)

1.19.1 Campus cleanliness: campus cleanliness at Polba Mahavidyalaya is a shared responsibility that requires the active participation of both students and staff. By prioritizing cleanliness, the college can create a healthier, more inviting, and productive learning environment. It is crucial for everyone in the Polba Mahavidyalaya community to recognize their role in maintaining a clean campus, ensuring that future generations can enjoy the benefits of a well-kept educational space.NSS volunteers take part in the cleanliness programme of the college.

1.19.2 Rainwater harvesting: A Rain water harvesting system is created in a small scale under *Jal Dharo Jal Bharo* Project. Rain water from the roof of RUSA building comes down through pipes and stored in a drum with a capacity of 1000 litres located in the garden near the building. An open tank is there in the NSOU campus where rain water is stored and for gardening. A new project for rainwater harvesting further with the help of Zila Parishad in large scale.

1.19.3 Solar street lamps: NO

1.19.4 Carbon dioxide neutrality on the campus by developing greenery:

To achieve carbon dioxide neutrality at Polba Mahavidyalaya, a comprehensive strategy focused on developing and enhancing greenery on campus is essential. This initiative will not only mitigate carbon emissions but also promote biodiversity, improve air quality, and foster a sustainable environment for students and the community.

Achieving carbon dioxide neutrality at Polba Mahavidyalaya through the development of greenery is not just an environmental necessity but a holistic approach to enhancing campus life. By implementing strategic greenery initiatives, the college can significantly reduce its carbon footprint, improve air quality, and foster a sustainable community. This commitment to environmental stewardship will not only benefit current students but also set a precedent for future generations, ensuring that Polba Mahavidyalaya remains a leader in sustainability and education.

1.19.6 Man-made nest to attract some birds to maintain ecological balance: NA

1.19.7 Restriction in use of plastic and plastic products: Polba Mahavidyalaya believes in a green and clean campus. Restricting plastic use encourages the development and adoption of sustainable alternatives. Materials such as biodegradable plastics, glass, and metal can replace single-use plastic products. For instance, many countries have successfully implemented bans on plastic bags, leading to a surge in reusable bag usage. This shift not only reduces plastic waste but also stimulates innovation in sustainable materials. By promoting alternatives, we can create a circular economy that minimizes waste and conserves resources.

1.19.8 Culture of some ducks, swans etc., for scenic beauty in pond or any water body resources (if available): NA

1.19.9 Green monitoring by green committee/volunteers/team: The Green Committee at Polba Mahavidyalaya exemplifies the power of collective action in addressing environmental issues. Through the dedication of volunteers and the active engagement of the college community, the committee not only promotes sustainability but also cultivates a sense of responsibility towards the environment. As we face increasing ecological challenges, initiatives like those at Polba Mahavidyalaya are essential in fostering a culture of sustainability and ensuring a healthier planet for future generations.

1.19.10 Training on vermicomposting: Training on vermicomposting at Polba Mahavidyalaya is not just an educational initiative; it is a vital step towards fostering sustainable agricultural practices, enhancing soil health, and empowering future generations. By investing in such training programs, the institution can play a pivotal role in promoting environmental conservation and economic development within the community. It is imperative that Polba Mahavidyalaya embraces this opportunity to lead by example and inspire others to adopt sustainable practices for a better future.

1.19.11 Celebration of 'No vehicle Day' on a particular day: No

1.19.12 Dams inside the campus to meet the demand for water: The Big Pond inside the campus of Polba Mahavidyalaya is a valuable asset that holds immense potential for educational, ecological, and recreational purposes. By actively promoting its utilization, the college can enrich the learning experience of its students, contribute to biodiversity conservation, and foster a sense of community. It is imperative for the administration and students to collaborate in developing a comprehensive plan that maximizes the benefits of this natural resource, ensuring that it remains a cherished part of the campus for generations to come.

1.19.13 Installation of fire safety instruments in all the buildings/departments: Yes(Partial)

1.19.14 Toilets/separate toilets for differently abled students: The establishment of separate toilets for differently abled students at Polba Mahavidyalaya is a crucial step towards fostering an inclusive and supportive educational environment. By addressing the needs of differently abled students, the institution can promote dignity, respect, and equal access to education. It is imperative that Polba Mahavidyalaya takes proactive measures to ensure that all students, regardless of their physical abilities, have the facilities they need to succeed. In doing so, the institution will not only enhance the academic experience for differently abled students but also set a precedent for inclusivity in higher education.

1.20 Over all noise level

Sl no.	Inside campus area	Outside campus	Class room	Lawn	Office	Laboratory	Canteen
1	<50 dB(A)	55-65 dB(A)	<50 dB(A)	<50 dB(A)	<50 dB(A)	<50 dB(A)	<50 dB(A)

1.21 Is there any device (preferably HVS: High Volume Sampler) for measuring ambient air quality in the campus (if so, pl mention the data month wise): **"yes", "no" and "not applicable": NO**

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2. WATER MANAGEMENT

2.1 Whether college has an efficient and hygiene water storage mechanism to minimize the loss of water during storage
"yes", "no" and "not applicable": Yes
2.2 Whether college is using water filter with RO, Aqua Guard and/or large water filter with cooler at the strategic locations in the college. If so, are they under AMC: **"yes", "no" and "not applicable": Yes**
2.3 Whether college has its own mechanism in repairing of water leakage: **"yes", "no" and "not applicable": Yes**
2.4 Is there any rainwater harvesting unit in college: **"yes", "no" and "not applicable": Yes**
(if so, what are the uses of this water:)
a)Watering Plants
b) Cleaning of campus
2.5 Whether college has developed any reuse and recyclable of water system: **"yes", "no" and "not applicable": Yes**
2.6 Is there any scope of measurement of water quality parameters used in hostel, lab, office, canteen, tap water (if so, parameters: pH, EC, TDS *etc*.) : Yes
2.7 Lab-wise water consumption (lt/d)
Chemistry: 10 liter
Zoology : 15 liter
Botany : 10 liter
Physics : 10 liter
Geography: 5 liter
2.8 Whether college has sufficient/adequate drainage system: **"yes", "no" and "not applicable": NA**

Water Resources: Utilisation and Conservation

Our organization is in favor of conserving and using water wisely. To prevent shortages or waste, all water resources—natural and artificial—are routinely monitored and maintained. Water connections in restrooms, labs, offices, staff rooms, wayside canteens, etc. are inspected and maintained on a regular basis; any leaks, no matter how small, should be fixed right away. Awareness campaigns and demonstrations are organized to raise awareness of water conservation and appropriate use among the surrounding populations, faculty, and students.

Water resource availability and management

The availability of water resources can be divided into two major categories: 1) Natural and 2) Artificial. Natural water sources include ponds, underground water, and rainfall. Usually, they are artificially preserved and made available according to the season. For example, the season has an impact on the availability of pond water; it is highest during the rainy season and lowest during the summer. Subsurface water is usually removed with hand pumps, but rainwater harvesting is the technique by which it is gathered and stored.

Drinkable Water that is Safe

The main sources of drinking water are underground supplies that are piped in and kept in tanks for round-the-clock consumption. The pipe line supplies about 10,000 units. Every building has overhead tanks on its roof that supply water to the staff room, labs, canteen, and restrooms around-the-clock. Staff, guests, and students can utilize the one water pillar (Jalastambha) and three purifiers with coolers, one of which is located in the administration building.

Rainwater Collection

Under the Jal Dharo Jal Bharo Project, a small-scale rainwater harvesting system is developed. Rainwater collected from the RUSA building's roof is sent down pipes and stored in a 1000-liter drum in the garden next to the structure. On the NSOU campus, there is an open tank used for gardening and rainwater storage. a fresh initiative to increase rainwater harvesting on a large scale with Zila Parishad assistance. On February 24, 2022, in the year 2022, this project was initiated.

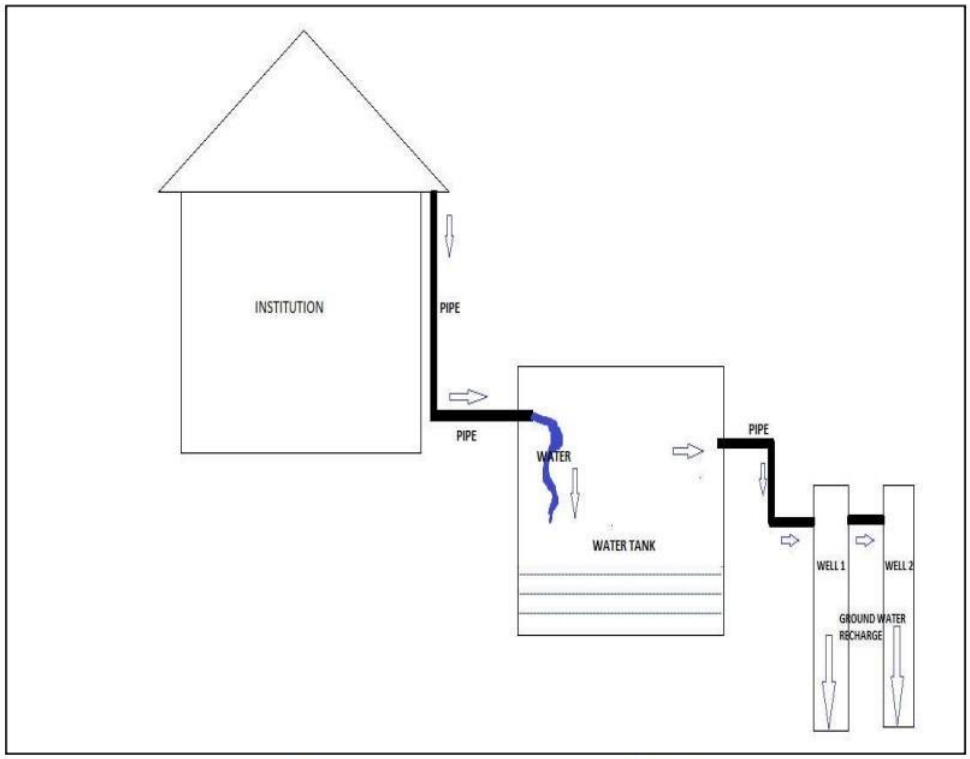

Fig: Rain water harvesting and ground water recharge system in Polba Mahavidyalaya

Fig.1 Rainwater Harvesting

3. ENERGY CONSERVATION

3.1 Reduction of energy consumptions, especially fossil fuel energy

3.1.1 Total electric consumption amount 28258. KWH/Yr

3.1.2 Average electrical consumption in a month 2354.83

3.1.3 Total No. of

i)LED-49

ii) CFL-21

iii) Tube lights-113

iv) Incandescent lamps-01

v) Fans-93

vi) Air conditioners/Air Coolers-01

3.1.4 Whether college has any provision/choice of renewable and carbon-neutral electricity options: **"yes", "no" and "not applicable": Yes**

3.1.5 Whether college has planned to install solar panels: **"yes", "no" and "not applicable"**

(if so, Project installed/working: Date/Month/Year): NA

3.1.6 Whether college has efficient water heating system: **"yes", "no" and "not applicable": NO**

3.1.7 Whether the staff members of all sectors are concerned in turning off electrical appliances when not in use in both commercial and residential area: **"yes", "no" and "not applicable": Yes**

3.1.7 Is there any monitoring system – like put off the main switch where there is no need of electricity? **"yes", "no" and "not applicable": Yes**

3.1.8 Whether the users follow the appropriate and measurable targets for a reduction of energy, such as, computer, printers, electrical equipment when not in use: **"yes", "no" and "not applicable": Yes**

3.1.9 Is there any options for equipment's running on standby mode: **"yes", "no" and "not applicable": Yes**

3.1.10 Whether college has taken initiative to purchase efficient and environmentally sound appliances in order to fulfill the green budget: **"yes", "no" and "not applicable": NA**

3.1.11 Whether college has its own mechanism in repairing of electrical fault:

"yes", "no" and "not applicable": No

3.1.12 Whether the class rooms are with sufficient illumination in day time and ventilation:

"yes", "no" and "not applicable": Yes

Number of lights & fans in class room (average): 4

Use of light & fans in the day time (average hours): 4

Number of windows per class: 4

Natural light source in day time (in hours) (average per class):

3.1.13 How many (%) e-notice generated by the college for academic/administrative purposes in a month: 90%

3.1.14 How many (%) paper-notice generated by the college for academic/administrative purposes in a month: 10%

3.1.15 Total number of computer, printer, Laptop, Xerox machine

Computer-27

Printer- 7

Laptop-2

Xerox Machine-03

3.1.16 Whether college has organized lectures on energy conservation in order to give awareness to the students: No

"yes", "no" and "not applicable"

3.2 Energy conservation strategies

3.2.1 Whether the architectural design for college is based upon use of natural lighting & ventilation, to save extra power for bulbs and fans: **"yes", "no" and "not applicable": Yes**

3.2.2 Whether florescent bulbs are replaced with CFL bulbs/LEDs: **"yes", "no" and "not applicable": Yes**

3.3 Minimize the use of unsustainable transport

3.3.1 What are the available/maximum transport facilities used by the staff members/students etc., - mention the number (in average per day):

Bi-Cycles- 150

Public Transport- 250

Motorcycle: 15

E- cycle – 02

Car-01

3.3.2 Whether college has any common car sharing/car pool among the students and faculty: **"yes", "no" and "not applicable": No**

Energy Consumption and Management

Our college's mission is to save energy and provide clean, green energy. Even though the institution requires a large amount of energy to function properly.

Energy Consumption

Table-1: Energy Consumption Pattern

Sl. No.	Accessories/equipment	Total	Wattage	Total Wattage	Total Energy Consumption (KW/Year)	Remarks (Average Hours)	Cost (in Rs.)
1	LED Bulb	49	3	147	188	7 HOURS PER DAY	1416.00
2	Tube light	113	22	2486	3178	7	23956
3	Ceiling fan	93	75	6975	8917	7	67215.00
4	Air Conditioner	1	1000	1000	767	7	5782.00
5	Desktop Computer	27	50	1350	740	3	5576.00
6	Laptop	20	50	1000	548	3	4130.00
7	Printer	7	250	1750	1598	5	12046.00
8	Water pump	4	925	3350	857	1	6456.00

9	CCTV	32	7	224	1964	24	14802.00
11	Projector	03	250	750	411	3	3097.00
12	Sound system	04	30	120	66	3	495.00
13	Xerox machine	03	1000	3000	2739	5	20649.00
14	CFL Bulb	21	60	1260	1381	6	10077.00
15	Wi-Fi	02	15	30	38	7	290.00
16	Warning Bell	01	12	12	15	7	116.0
17	Cook Top	02	1500	3000	2739	5	20650.00
18	Water Purifier	06	25	150	438	8	3221.00
19	Wall Fan	09	55	495	1266	7	9540.00
20	Vehicle Charging Point	02	36	72	66	5	495.00
21	Mobile charging point	25	15	375	342	5	2582.00
	Total				**28258.0**		**212591.0**

NB: **Energy consumption is based on college hour (7 hours) for one year

** For water pumps average wattage is calculated for three different pumps. Time is calculated for 1 hour.

** For projector 2 hours' time is calculated.

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Table-1a: Energy Consumption Pattern

Pattern of energy consumption

Room	Celling Fan	Wall/ stand Fan	LED Bulb	Elec. Bulb	A.C	Printer	Computer & UPS	Projector	CC T.V	Xerox	Music System	Tube Light	Water Pump	Cook Top	CFL Bulb	Bell	Wi-Fi	Remarks
Staff	5	3	3			1	1+1		1			4	1				1	
1st Floor			3						1							1		
203	6							1	2		2	3						
202	6							1	2		1	3						
2nd Floor			2						1									
302	6						1+1	1	1		2	2						
303	2								1			1						
303A	2		1						1			1						
IQAC	3	1	1				1+1		1			6						
Ground Floor	2		10						4			4	3					
102A	4								1			1						
102	2								1			1						
103A	4		1						1			1						
103	2								1			1						

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Table-1b: Energy Consumption Pattern

Pattern of energy consumption

Library	8					1	3+0		3			16			1			2 computers not working. 3 tubes not working
106	4								4			3						
108	4								1			4						
109	4								1			5						
Office	6	2	1			3	5+5		1	1		18	2	1			1	10 tubes not working
Principal Room			1		1	2	2+2		1	2		5			20			8 CFL not working
Geo. Lab			3									1						1 LED bulb not working
Generator			1															
H 101	3											4						
H102	3											4						
H103	2											4						
H- Lobby												3						
Office Ground									2									2 cc tv not working
SC 101	4											4						
SC 102	4											4						
SC Lobby & Toilet		2	2									4						1 water boring (1 hp)

At Polba Mahavidyalaya, putting energy-efficient procedures and technology into place can drastically cut energy usage, save operating expenses, and advance environmental sustainability, all of which are advantageous to the organization and the larger society.

The sections of Polba Mahavidyalaya's action plan for effective energy management are as follows:

Methods for Reducing Energy Use

1. Turn off the fans and lights when the classes are not in session.
2. Using electrical items that use less energy, such as CFL lights.
3. When the room is comfortably warm, turn off the air conditioner.
4. Water pump auto-cut switches.
5. Student awareness of energy conservation.
6. Using unconventional energy sources, such as solar energy.
7. Energy-saving courses and seminars.

4. WASTE MANAGEMENT

4.1 Maximization of the process of wastes & minimization of non-renewable refuse

4.1.1 Is there any method of segregation of waste materials?**"yes", "no" and "not applicable": Yes**

4.1.2 Total amount of solid waste generated in the campus (including tree droppings & Lawn wastes): 8.5 kg

Total number of staff: 45

Per capita production per day- 17gm/capita

4.1.3 Whether college arrange any workshop/seminar/conference for awaring the students/staff for specific arrangements for recyclable wastes: **"yes", "no" and "not applicable": Yes**

4.1.4 Whether college follow specific disposal method for solid or liquid waste in specific manner: **"yes", "no" and "not applicable": Yes**

4.1.5 Whether the recycling/collection facilities are provided by the city Municipality and/or private suppliers (including glass, white plastic bottle, printer cartridges, cardboard, furniture, plastics, thermocol, waste papers, electrical goods & alliances, electronic gadgets, instruments, equipment, packing materials):

"yes", "no" and "not applicable": Yes

4.1.6 Whether college has any composting ground/vat or any collection unit *etc*.:

"yes", "no" and "not applicable" Yes

(if yes, what is the percentage of waste undergone composting and the final use of the products) : 50%, used in Herbal Graden and Kitchen Garden of the College.

4.1.7 Is there any mechanism of treatment/uses of domestic influent in the college campus (if so, what is the capacity of treatment plant/composting *etc*.): **"yes", "no" and "not applicable": No**

4.1.8 Minimize use of chemical pollutants :

Sl No.	Department	Name of the waste			Total (a+b+c)	Characterization(if any)	Method of disposal	Agency if any
		Chemical (a)	Biological waste (b)	Microbial waste (c)			Polba Gram Panchayat takes responsibility of all types of wastes.	
1	Botany		Y					
2	Chemistry	Y						
3	Zoology		Y					
4	Physics	NA						
5	Geography	NA						

4.1.9 Records of dustbins/collection bins inside the campus

Sl no.	Location of dustbin	No. of dustbins			Quantity of collection (per day)	Disposal time	Cleaning by ecofriendly product Y/N
		Biodegradable	Non-biodegradable	Plastic waste			
1	Main Building	6	6	NA	3 KG	Morning	No

2	Science Building	1	1	NA	250 GM	Morning	No
3	Canteen	1	1	NA	5 .25KG	Morning	No

The sources or generation of waste, as well as its collection, storage, transportation, and management, are all included in campus waste management. The college administration has implemented an appropriate waste management strategy in order to safeguard stakeholders and the environment from the negative impacts of waste.

Fig.2: Waste Management Strategy within the Campus

Sources of Waste within the Campus: All products whose usefulness and functional ability are no longer available are considered sources of waste. As a result, it comprises wastes from the canteen (food items and food package trash), the office (papers, stationary items, and chalk dust), the classroom (instrument parts, glassware, chemicals, and papers), the seminar halls, and the auditorium (papers, plastic bottles, and food packages). Other than this, the principal's room, playgrounds, and other places are the sources of waste.

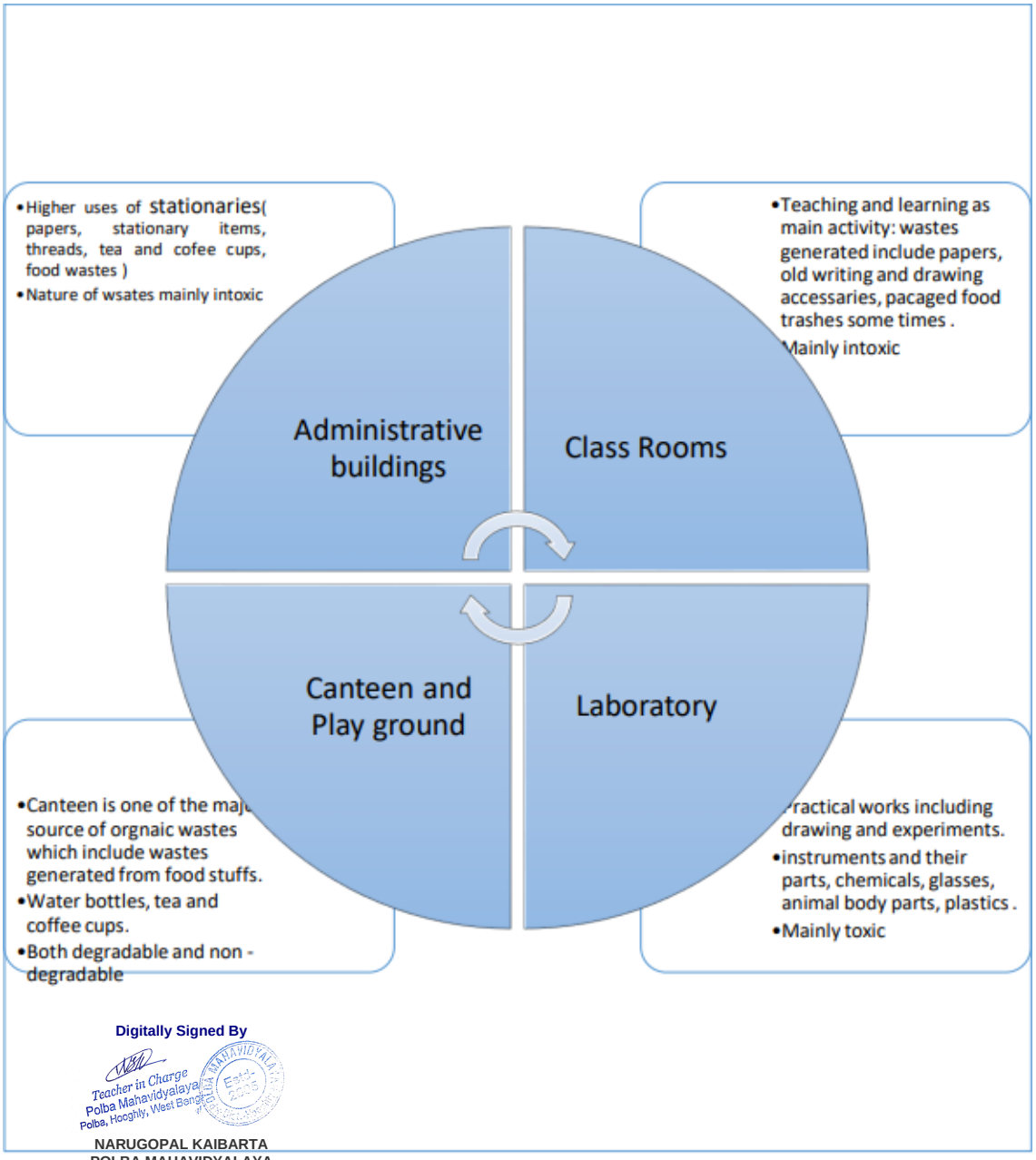

Fig.3: Sources of wastes within the campus

Type of Wastes: The categorization of waste depends on the various uses of resources within the campus and on the basis of various utilizations there are the following types of waste:

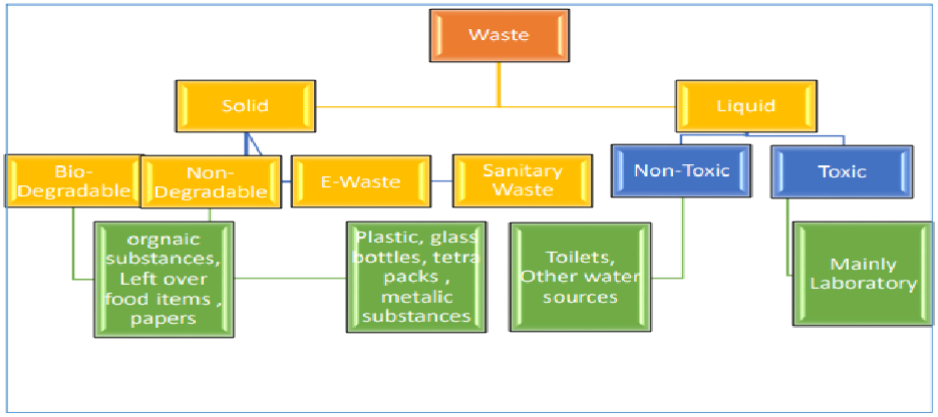

Fig. 4: Type of wastes within campus

Depending on their respective conditions, the wastes produced at the college can be divided into solids and liquids. In addition to being handled differently and referred to as "e-wastes," the wastes produced by electronics and electrical equipment can also be further separated into categories that are non-degradable and biodegradable. Organic materials, copious amounts of leftover food, primarily from college canteens, and office and classroom papers are among the biodegradable wastes. Plastic objects, glass bottles, glassware, plastic water bottles, food tetra packs, metallic objects, and residues from non-electrical equipment are examples of non-biodegradable garbage.

Electric fans, computers, printers, tubes, electric bulbs, electrical wire, and other electronic devices are all referred to as "e-wastes." Typically, liquid sanitary waste is produced by toilets. Sanitary wastes, water sources, and science department laboratories are the typical sources of liquid wastes. These can be divided into non-toxic and toxic categories. We at our campus put a lot of effort into managing this trash because unsanitary waste management is a major issue. It encompasses all types of toilet waste, including solid, semi-solid, and liquid waste. Disposing of sanitary serviettes is a really

difficulttask.

Storage and collection: To reduce trash's negative consequences, effective waste management is necessary. As part of Polba Mahavidyalaya, all participants fulfill their obligations and dispose of their trash in the proper places to reduce pollution and promote proper waste management. Garbage containers are usually placed in different areas to collect and store waste based on requirements.

There are

Fig.4: Different Types of Bins

distinct containers for toxic trash as well as things that are both biodegradable and non-biodegradable in these containers.

Table-2: Location of waste bins

Location	Waste bin (Color)	Size	Waste Type	Total Number	Collection
Principal's Room	Blue	Small	Non-degradable	01	Daily
Office	Blue	Small	Non-degradable	01	Daily
	Blue	Big	e-wastes	01	Quarterly
Staff room	Blue	Small	Non-degradable	01	Daily
Classroom	Blue	Big	Non-degradable	01/floor	Daily
Laboratory	Blue	Small	Non-degradable	01/laboratory	Per week

	Blue	Small	E-waste /Hazardous	01/Laboratory	Per week
Canteen	Blue	Big	Non-degradable	01	Daily
	Green	Big	Degradable	01	Daily
Play Ground	Blue	Big	Non-degradable	01	Daily
Main gate	Blue	Big	Non-degradable	01	Daily
Toilet (Girls)	Blue	Small	Non-degradable	01	Daily

Transportation: Panchayat Person from Polba Gram Panchayat engaged in the collection of waste generally collect it and dumped it in a big hole at the corner of the campus generally far from any building.

Waste Management: The management of waste is based on the principle of 'Reduce,

Reuse, and Recycle (RRR).

Bio-degradable wastes: Papers and newspapers, food items and leftover food, fruit and vegetable peels, egg cells, paper plates and cups, leaves and grasses, etc. are the main sources of biodegradable wastes. Most biodegradable waste is produced in canteens and gardens. Green bins are where these wastes are disposed of; they are found in the garden area, playground, and canteen. Every day, employees of the municipality gather this waste. To use as green manure, leaves and grasses are frequently thrown into a large hole in the

Corner of the corner far from buildings.

Non-degradable wastes are solid wastes that cannot biodegrade and must be treated properly before being recycled. This trash is collected in blue bins. Along with non-dissolved paper materials, these contain plastic and metallic elements. These trash should be handled properly because they pollute the environment. After being collected from the institution, they are often taken to waste treatment and disposal facilities where plastic, paper, and glass components are separated.

Sanitary Wastes: Sanitary Wastes can be found in liquid, solid, or gaseous forms and are typically associated with the usage of toilets and sanitary pads. For sanitary pads, sanitary pad disposal machines are installed in girls' toilets and girl's common rooms.

Hazardous Wastes:

Hazardous wastes hurt human health and, in the case of poisoning, can cause organ failure and other diseases like cancer. Other bodies may be impacted by direct contamination, water contamination, or air contamination. They can be found in solid, semi-solid, or liquid states. Numerous dangerous instruments, chemicals, parts, and spares are used in the laboratory and must be handled with the utmost care.

Old instruments are put to use after being serviced, and damaged equipment is stored in the warehouse. They are traded in return for scrap. Hazardous chemicals are stored and disposed of properly using double containers.

Table 3: Objects sighted near the institution

Sl. No.	Object sighted	Yes/No	Distance (if found)
1	Municipal dump yard	No	-
2	Garbage heap	No	-
3	Public toilets	No	-
4	Sewer line	No	-
5	stagnant water	No	-
6	Open drainage	Yes	100m
7	Manufacturing unit	Yes	1.5 km
8	Public Transport	Yes	100 m
9	Community halls	No	-
10	Open garbage	Yes	120m

Table 4 – Waste minimization and recycling

Strategy	Whether adopted		
Yes/No	If yes then how	Remarks	
Segregation of wastes	yes	Separate dust bins	
Daily collection	Yes		
Vermicomposting	Yes	-	
Recycling	No	-	
Reuse	yes	After servicing	
Reduce	yes	Digital	
Awareness campaign	yes	Rally, seminars , Lecture	
Zero garbage policy	No		
No plastic zone	yes	By order	
E waste storage	yes	Store room	
Department wise e waste register		yes	

Digitally Signed By
Teacher in Charge
Polba Mahavidyalaya
Polba, Hooghly, West Bengal
NARUGOPAL KAIBARTA
POLBA MAHAVIDYALAYA
West Bengal
India 712148
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5. E-WASTE MANAGEMENT

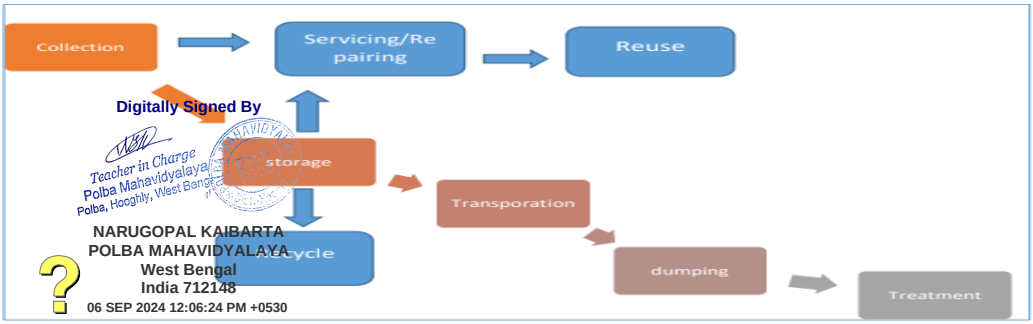
5.1 Quantity of e-waste generated: 15 kg per annum
5.2 Number of cartridge used month-wise: 02
5.3 Number of cartridge disposed in a year (average): 7
5.4 Number of times refilling & reusing method of disposal of e-waste (if any) : Refilling 6-7 times, disposal once in a year.
5.5 Whether college has conducted any awareness programme on e-waste management:No
"yes", "no" and "not applicable":
5.6 Is there any means of disposal of unused computers, printers and electronic wastes through authorized agents: **"yes", "no" and "not applicable": No**
5.7 Disposal methods: Polba Gram Panchayat takes responsibility of disposal of all kinds of wastes.

Sl No.	Location	Amount of generation	Method of disposal	Name of the Agency (if any) for disposal

E-waste: E-waste disposal is a major concern that complies with the CPCB 2016 rule. "RRR" is adhered to in order to lessen the impact of these wastes. Outdated PCs, laptops, and printers are repaired and repurposed to reduce the quantity of electronic waste. Other electronic devices such as tube lights, fans, printer cartridges, connections, switches, and electronic light bulbs are stored in a specific area or, if reusable, are disposed of in black bins. These wastes are sold to approved parties along with used newspapers. The service provider inspects the returned equipment after each department and office reports non-operational electronic products to the office clerk. The equipment is placed on the list of items to be disposed of and brought to the store room if it is found that it is not the cause of the problem.

providers of recycled materials. Waste recycling requires extended producer responsibility (EPR), which is a feature of many electronic devices. The Panchayat gathers these electronic trash that are unusable , treats and disposes of them.

Suppliers for recycling. Extended producer responsibility (EPR), which many electronic products also incorporate, is necessary for waste recycling. Those e- wastes cannot be reused are collected by Panchayat for Transportation and dumping and for further disposal and treatment.



Fig, 5 E-waste management

6. GREEN AREA MANAGEMENT

6.1 Is there any garden in the college campus/outside the campus under college custody: **Yes**
"yes", "no" and "not applicable"
6.2 Whether the garden is watered by using drip/sprinkler irrigation system: **"yes", "no" and "not applicable": No**
6.3 Is there any mechanism of review of periodical monitoring of tree species: **"yes", "no" and "not applicable": Yes**
6.4 Whether the college has taken any programme for plantation of some fruit trees which can attract birds, bees *etc*.
"yes", "no" and "not applicable": Yes
6.5 Biodiversity mapping : See the Annexure IV

Sl No.	Name of the place	Area	Type of plantation				Species name& quantity	Name of the Family	Total no. of species
			Indigenous plants	Medicinal plants	Ornamental plants	Exotic plants			

6.6 Records of Plantation programmes : See the Annexure V

Sl No.	Programme conducted	Date of functioning	No. of tree planted	Present status of the species	Documentation (if any)	No. of beneficiaries

Our college is located in a rural area and is mainly surrounded by scattered vegetation. Therefore, it is very important to add more and more greeneries to keep our local environment green and eco-friendly. Our college enthusiastically cares for greeneries and tries to increase the density of greeneries through afforestation. About 40.65% of the area is under green coverage.

List of Plants/Trees within campus Table-5

Sl. No.	Name of the plant/tree	Total No.	Type	Utility	Family
1.	*Shorea robusta* (শাল গাছ)	05	Tree	1. Used as timber. 2. used as ayurvedic medicine.	Dipterocarpaceae.
2.	*Acacia auriculiformis* (সোনাঝুড়ি)	05	Tree	1. Used as timber. 2. Good for making paper, furniture etc.	Fabaceae
3.	*Swietenia mahagoni* (মেহোগিনি)	02	Tree	1. Used for make musical instrument. 2. Used for furniture.	Maliaceae
4.	*Dalbergia sissoo* (শিশু)	20	Tree	1.Used as fooder,wood,shade etc.	Fabaceae
5.	*Albizia lebbeck* (শিরিষ)	03	Tree	1. Used as timber.	Fabaceae
6.	*Azadirachta indica*	09	Tree	1. Used as medicine. 2. Neem extract used as fertilizer.	Meliaceae
7.	*Michelia champaca* (চম্পা গাছ)	01	Shrub	1. Used as ornamental plamt.	Magnoliaceae
8.	*Mangifera indica*	08	Tree	1. The tree is more known for its fruit(Mango).	Anacardiaceae
9.	*Atrocarpus heterophyllus* (কাঁঠালগাছ)	01	Tree	1. Jackfruit is naturally sweet,with subtle Pineapple like flavor.It can be used to make variety dishes.	Moraceae
10.	*Psidium guajava* (পেয়ারাগাছ)	02	Tree	1.Both the guava fruit and leaves provide antioxidants,fibre,vitamins.	Myrtaceae
11.	*Tamarundus indica* (তেঁতুলগাছ)	06	Tree	1.Used to treat inflammation,stomach pain and rheumatism in traditional medicine.	Fabaceae
12.	*Litchi chinensis* (লিচুগাছ)	01	Shrub	1.Lychee fruit has many health benefits.it is good for heart,liver,brain etc.	Sapindaceae
13.	*Manilkara zapota* (সোবেদা)	01	Tree	1. The bark used to make chewing gum. 2. Sapota is rich in vitamin C and antioxidants that help build your immunity.	Sapotaceae

14.	*Elaeocarpus serratus* (জলপাই)	01	Tree	1. It is mainly used in making chatneys.	Elaeocarpaceae
15.	*Ziziphus mauritiana* (কুলগাছ)	03	Tree	1. The fruit is eaten raw, pickled or used in beverages.	Rhamnaceae
16.	*Bergera koenigii* (কারিপাতা)	01	Shrub	1. The fresh leaves used in Indian traditional medicine. 2. Dried leaves also used in Indian cooking.	Rutaceae
17.	*Annona squamosa* (আতা)	01	Shrub	1.Used as fruit and treating cardiac aliments, diabetes etc.	Annonaceae
18.	*Annona reticulata* (নোনাআতা)	01	Shrub	1.Used as fruit and treating cardiac aliments, diabetes etc.	Annonaceae
19.	*Hibiscus rosa-sinensis* (জবাগাছ)	06	Shrub	1. Used as ornamental plant for garden. 2.Hibiscus tea helps lower blood sugar level, cholesterol etc.	Malvaceae
20.	*Neolamarckia cadamba* (কদম গাছ)	01	Tree	1.The fruit and inflorescence reportedly are edible by human. 2.Used as ornamental plant.	Rubiaceae
21.	*Citrus lemon* (লেবুগাছ)	06	Shrub	1. Citrus juice is used as an ingredient in a variety of dishes i.e. Salad,	Rutaceae

Table-6

				vegetables etc. 2. Citrus are rich in vit.C, flavonoids, which improved gastrointestinal function and health.	
22.	*Sesbania grandiflora* (বকফুলগাছ)	03	Tree	1. It is used to make highly nutritional fodder.	Fabaceae
23.	*Carissa caranda* (করমচাগাছ)	01	Shrub	1.The biggest use of this fruit is as a faux cherry in cakes, pudding etc.	Apocynaceae
24.	*Phyllanthus emblica* (আমলকিগাছ)	02	Tree	1.Amla has been proven to have anti-hyperglycemic, antioxidant activities etc.	Euphorbiaceae
25.	*Murraya paniculata* (কামিনি গাছ)	01	Shrub	1. Used as ornamental plant.	Rutaceae
26.	*Musa acuminate* (কলাগাছ)	10	Large herbs	1. Fruit used as food. 2. Banana provide large amount of potassium which helps our body maintain a healthy heart and blood pressure.	Musaceae
27.	*Syzygium cumini* (জামগাছ)	02	Tree	1. Favoured for its fruit, timber and ornamental value.	Myrtaceae
28.	*Aegle marmelos* (বেলগাছ)	03	Tree	1. Leaves used in worship of lingam, the icon of Shiva. 2. Seeds are used in traditional medicine to treat various illnesses.	Rutaceae
29.	*Mimusops elengi* (বকুলগাছ)	02	Tree	1.It is well documented for several medicinal properties like diuretic effects, gastro protective, antifungal etc.	Sapotaceae
30.	*Borassus flabellifer* (তাল গাছ)	01	Tree	1. Used as fruit. 2.Leaves are used for making house, fan, umbrella etc.	Arecaceae

Table-6 List of shrubs within college and its surroundings

Sl. No.	Local Name	Common Name	*Scientific Name*	Family	Type
1	Akanda	Giant Milkweed	*Calotropis gigantea*	Asclepiadaceae	Shrub
2	Ash shaora, Ban Jamir	Gin Berry	*Glycosmis pentaphylla*	Rutaceae	Shrub
3	Basak	Malabar Nut, White Vasa	*Adhatoda vasica*	Acanthaceae	Shrub
4	Basanti	Yellow Buttercups	*Turnera ulmifolia*	Passifloraceae	Shrub
5	Beli Ful	Jasmine	*Jasminum sambac*	Oleaceae	Shrub
6	Bhant, Ghetu, Ghantakarna	Hill Glory Bower	*Clerodendrum viscosum*	Verbenaceae	Shrub
7	Chitrak	Duranta	*Duranta repens*	Verbenaceae	Shrub
8	Dhutra, Dhutro	Devil's Trumpet, Horn of Plenty	*Datura metel*	Solanaceae	Shrub
9	Furcraea	Farcraea	*Furcraea* sp.	Asparagaceae	Shrub
10	Gothbegun, Tita Begun	Turkey Berry	*Solanum torvum*	Solanaceae	Shrub
11	Kalkasunda	Senna Sophera, Kasunda, Baner	*Senna Sophera*	Caesalpiniaceae	Shrub
12	Karipata	Curry-leaf	*Murraya koenigii*	Rutaceae	Shrub
13	Kasunda, Kalkasunda	Kasunda, Baner	*Cassia sophera*	Caesalpiniaceae	Shrub
14	Lal Varenda	Bellyache Bush	*Jatropha gossypiifolia*	Euphorbiaceae	Shrub
15	Lantana, Putus	Lantana	*Lantana camara*	Verbenaceae	Shrub
16	Pati Lebu	Lime, Common Lime	*Citrus aurantiifolia*	Rutaceae	Shrub
17	Pepe	Papaya	*Carica papaya*	Caricaceae	Shrub
18	Pora Narenga, Panjuli	Roast Potato Plant	*Phyllanthus reticulatus*	Euphorbiaceae	Shrub
19	Potari	Indian Mallow	*Abutilon indicum*	Malvaceae	Shrub
20	Rangan	Ixora	*Ixora singaporensis*	Rubiaceae	Shrub
21	Salparni	Salparni	*Desmodium ganjeticum*	Fabaceae	Shrub
22	Swet Berela	Arrowleaf-leaf Sida	*Sida rhomboidea*	Malvaceae	Shrub
23	Swet Jhanti	White Philippine Violet	*Barleria cristata*	Acanthaceae	Shrub
24	Tibraghandha/ Tivra Gandha	Siam Weed/ Bitter Bush	*Chromolaena odorata*	Asteraceae	Shrub

Table-7: List of Climbers within college and its surroundings

Sl. No.	**Local Name**	**Common Name**	***Scientific Name***	**Family**	**Type**
1	Anantamul	Anantamul	*Hemidesmus indicus*	Asclepiadaceae	Climber
2	Aparajita	Butterfly Pea	*Clitoria ternatea*	Fabaceae	Climber
3	Bhumishusni, Bhuikamri	Roundleaf Bindweed	*Evolvulus nummularius*	Convolvulaceae	Climber
4	Birbut	Alyce Clover	*Alysicarpus vaginalis*	Fabaceae	Climber
5	Chhoto Gaylalota, Amal lata	Bush Grape	*Cayratia trifolia*	Vitaceae	Climber
6	Gulancha lata	Gulanchalata	*Tinospora cordifolia*	Menispermaceae	Climber
7	Harjora, Harbhanga	Devil's Backbone	*Cissus quadrangularis Linn.*	Vitaceae	Climber
8	Idurkani, Buri Guapan	Hemigraphis	*Hemigraphis hirta*	Acanthaceae	Climber
9	Joljamani, Dadaya	Broom Creeper, Ink berry	*Cocculus hirsutus*	Menispermaceae	Climber
10	Kurakolmi	Small Morning Glory, Obscure Morning Glory	*Ipomoea obscura*	Convolvulaceae	Climber
11	Lata Futki, Shibjhul	Balloon Vine	*Cardiospermum halicacabum*	Sapindaceae	Climber
12	Nimukhi lata, Aknadi, Rajpatha	Tape Vine	*Stephania japonica*	Menispermaceae	Climber
13	Rabon Lata	Chinese creeper	*Micania micrantha*	Asteraceae	Climber
14	Satamuli	Satawari, Buttermilk Root, Climbing Asparagus	*Asparagus racemosa*	Asparagaceae	Climber
15	Telakucha	Ivy Gourd	*Coccinia grandis*	Cucurbitaceae	Climber

Table-8 List of Grasses within college and its surroundings

Sl. No.	Local Name	CommonName	*Scientific Name*	Family	Type
1	Chepti Ghas	Common Carpetgrass	*Axonopus* sp.	Poaceae	Grass
2	Durba Ghash	Durba	*Cynodon dactylon*	Poaceae	Grass
3	Jal Kathi Ghas	Running Mountain Grass	*Oplismenus compositus*	Poaceae	Grass
4	Jol Shyama Ghas	Jungle Rice	*Echinochloa colona*	Poaceae	Grass
5	Kedo Ghash	Kodo millet	*Paspalum scrobiculatum*	Poaceae	Grass
6	Makra	Crowfoot Grass	*Dactyloctenium* sp.	Poaceae	Grass
7	Mini Kash, Ullu ghas	Cogon Grass	*Imperata cylindrica*	Poaceae	Grass
8	Pothika Gaddi	Pothika Gaddi	*Eragrostis tenella*	Poaceae	Grass

Table-9: List of Ornamental Plants within college and its surroundings

Sl. No.	Local Name	Common Name	*Scientific Name*	Family	Type
1	Agav, Kantala	Agave	*Agave americana*	Agavaceae	Ornamental Plant
2	Agleonema sp.	Chinese evergreens	*Aglaonema* sp.	Araceae	Ornamental Plant
3	Boat Lyli, Rhoeo	Rhoeo, Moses-in-the-cradle	*Tradescantia spathacea*	Commelinaceae	Ornamental Plant
4	Chiruni Palm	Sago Palm	*Cycas revoluta*	Cycadaceae	Ornamental Plant
5	Dieffenbachia	Dieffenbachia	*Dieffenbachia* Sp.	Araceae	Ornamental Plant
6	Dracaena	Dragon Tree	*Dracaena mahatma*	Asparagaceae	Ornamental Plant
7	Ganda	Marigold	*Tagetes erecta*	Asparagaceae	Ornamental Plant
8	Ghrotakumari	Aloe Vera	*Aloe barbadensis*	Liliaceae	Ornamental Plant
9	Golap	Rose	*Rosa sp. Var.*	Rosaceae	Ornamental Plant

10	Jhaw	Thuja	*Thuja orientalis*	Cupressaceae	Ornamental Plant
11	Joba	Chinese Rose	*Hibiscus rosa sinensis*	Malvaceae	Ornamental Plant
12	Lal Bishalyakarani	Joseph's Coat	*Alternanthera dentata*	Amaranthaceae	Ornamental Plant
13	Ming aralia	Ming aralia	*Polyscias fruticosa*	Araliaceae	Ornamental Plant
14	Nayantara	Vinca	*Vinca rosea*	Apocynaceae	Ornamental Plant
15	Patabahar	Croton	*Codiaeum sp.*	Euphorbiaceae	Ornamental Plant
16	Philodendron	Philodendron	*Philodendron sp.*	Araceae	Ornamental Plant
17	Ribbon Grass	Blue Flax Lily	*Dianella sp.*	Asparagaceae	Ornamental Plant
18	Sanseveria	Sanseveria	*Sansevieria sp.*	Asparagaceae	Ornamental Plant
19	Sygnonium	African evergreen	*Syngonium podophyllum*	Araceae	Ornamental Plant

Table -10 List of Palm within college and its surroundings

Sl. No.	**Local Name**	**Common Name**	***Scientific Name***	**Family**	**Type**
1	Areca Palm	Areca Palm	*Dypsis lutescens*	Arecaceae	Palm
2	Chinese Fan Palm	Chinese Fan Palm	*Livistona chinensis*	Arecaceae	Palm
3	Khejur	Indian Datepalm	*Phoenix sylvestris*	Arecaceae	Palm
4	Narkel	Coconut	*Cocos nucifera*	Arecaceae	Palm
5	Supuri	Areca	*Areca catechu*	Arecaceae	Palm

Table-11: List of Mangrove, Aquatic Plant and Fern within college and its surroundings

Sl. No.	**Local Name**	**Common Name**	***Scientific Name***	**Family**	**Type**
1	Sundari	Looking Glass Mangrove, Sundarban mangrove	*Heritiera fomes*	Sterculiaceae	Mangrove
2	Kolmi Saak	Ipomoea	*Ipomoea aquatica*	Convolvulaceae	Aquatic Plant
3	Fern Sp.	Swordfern	*Nephrolepis* Sp.	Nephrolepidaceae	Fern

Table-12 Herbal Garden

Our college has one Herbal Garden which is very much useful and helps to keep the campus beautiful and healthy. This garden has many plants of many useful medicinal characterises.

Sl. No.	Name of the Plant	Scientific Name	Medicinal Properties	Utility	Family
1.	নিম গাছ	*Azadirachta indica*	Leaves, Fruits, and Stem bark.	1. Neem leaves are used to treat dental and malaria fevers, skin diseases etc.	Maliaceae
2.	তেঁতুল গাছ	*Tamarindus indica*	Fruit	1. Mainly used in Folk medicine. 2. Used to treat inflammation, stomach pain ,constipation etc.	Fabaceae
3.	শিউলি গাছ	*Nyctanthes arbor-tristis*	Leaves	1.Used as ayurvedic medicine and homeopathy.	Oliaceae
4.	নয়নতারা	*Catharanthus roseus*	Leaves and Flowers.	1.Plant used in Cancer and Diabetes.	Apocynaceae
5.	এলাচ	*Elettaria cardamomum*	The green seed pods	1.It helps to improved digestion.	Zingiberaceae
6.	অশোক গাছ	*Saraca asoka*	Stem and Bark	1.The bark used in dyspepsia and burning sensation. 2.It also used to treat leucorrhoea ,internal bleeding etc.	Fabaceae
7.	ঘৃতকুমারী	*Aloe vera*	Leaves	1.Used to treat skin injuries (burns, cuts, insect bites etc) 2.It helps in lower blood sugar level.	Asphodelaceae
8.	লেমন গ্রাস	*Cymbopogon schoenanthus*	Leaves	1.Used as a pain reliever and fever reducer. 2.Lemongrass extract is also used to provide the fresh scent in many soaps, candles etc.	Poaceae
9.	আমলকী	*Phyllanthus emblica*	Fruit	1.Used in ayurvedic medicine. 2.Used to treat diarrhea, jaundice etc.	Euphorbiaceae
10.	লিলি	*Lillum candidum*	The bulb Leaves and Flowers.	1.Lillium mainly helps in lung deficiency. 2.Used to treat ulcers and coughs.	Lilliaceae
11.	লেবু	*Citrus lemon*	Fruit		Rutaceae
12.	শালগাছ	*Shorea robusta*	Resin	1.Reduces swelling pain that is associated with	Dipterocarpaceae
13.	জবা গাছ	*Hibiscus rosa-sinensis*	Flower and Leaves.	1.It may help to manage weight. 2.It may lower cholesterol level.	Malvaceae
14.	কারিপাতা	*Bergera koenigii*	Leaves	1.Curry leaves helps in Lower cholesterol level. 2.Curry leaves promotes weight loss.	Rutaceae
15.	পেয়ারা	*Psidium guajava*	Leaves	1.It helps in lower blood sugar level. 2.It helps in digestive system.	Myrtaceae
16.	করমচা	*Carissa carandas*	Fruit	1.Fruit used in Indian herbal system of medicine. 2.Used to treat acidity, Urinary disorders etc.	Apocynaceae
17.	বেলগাছ	*Aegle marmelos*	Fruit	1.Used to treat fever, diabetes etc. 2.Seeds used in traditional medicine.	Rutaceae
18.	বকুল গাছ	*Mimusops elengi*	Bark, Flower and Fruit	1.Used in ayurvedic medicine. 2.It is mainly used for dental aliments such as bleeding gums.	Sapotaceae
19.	জাম গাছ	*Syzygium cumini*	Fruit and leaves	1.Used in treating kidney problems, diabetes. 2.Used to rectify blood.	Myrtaceae

Playground: A large play area with grass is maintained by the college to preserve the campus's green spaces. This enhances the campus's aesthetic appeal while also preserving the ecological balance. In addition, students spent their free time outside playing games and sports, particularly in the winter. There is no plastic on the playground.

By product, usages, and management

Fruits and flowers are examples of plant and tree by-products. Herbs and fibers. No gardeners are employed, to take care of the garden generally teachers and students take part. NSS volunteers and members of the eco-club actively participate in this programme. Usually, the plants are irrigated with non-toxic wastewater. Rain and subsurface water are essential to trees.

Table- 13: Policy adopted for green campus

Program/strategy	Yes/no	Status/Duration	Policy/frequency	Achievement
Afforestation Programme	Yes	One or two days	Annual	20 plants per year
Awareness campaign	Yes	Within Campus	Poster	Students take care of plants
Medicinal garden	Yes	Exist	Regularly maintained	Used to cure ailments
Seed bank	No	Under process	NA	NA
Seminar/symposium	Yes	One day	Annual	Awareness among students
Register	Yes	Regularly maintained	Annual	Help to maintain biodiversity records
eco -club	Yes	Regular	Regular	Helps to keep campus green and clean
Community Program	Yes	1-7 days	Annual	Through NSS , awareness amongst community

Standard Procedures

All parties involved in the institution follow the policies and procedures that promote maintaining cleanliness and environmental friendliness in order to preserve the ecological balance and keep our campus tidy. Here is a summary of these:

1. Only the specified beans in a specific place may be used to dispose of food packages, papers, and leftovers.

2. After using the tap, everyone must turn it off.

3. The college as a whole is a "No Plastic Zone."

4. Smoking is not permitted at all on college grounds.

5. Each department manages its garbage in accordance with the waste types it produces and its own specifications.

6. Usually, gardens use waste water to irrigate plants.

Digitally Signed By

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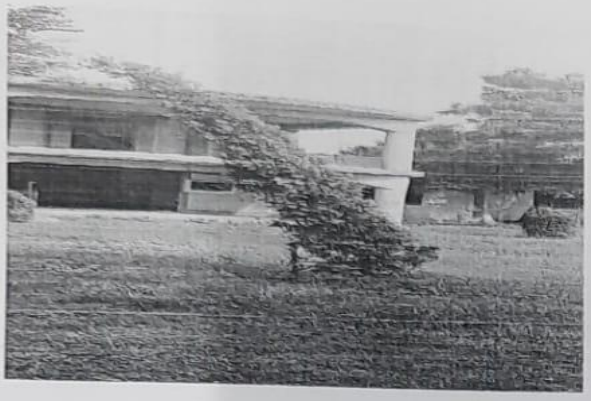

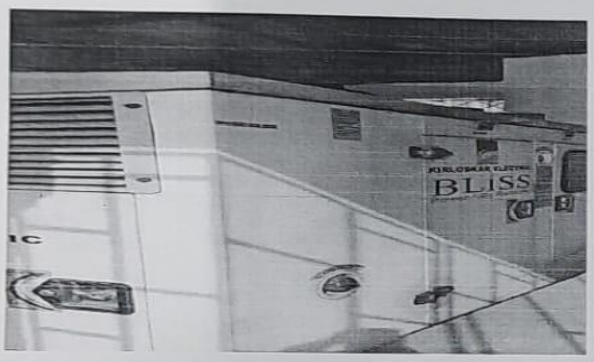

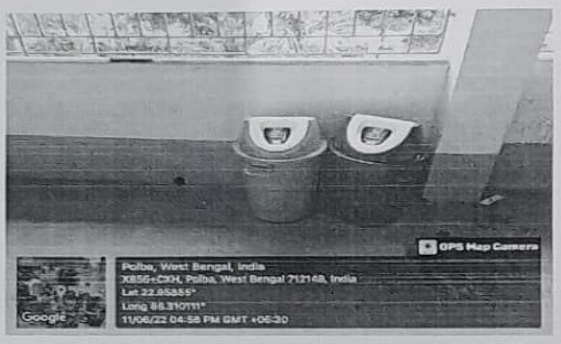

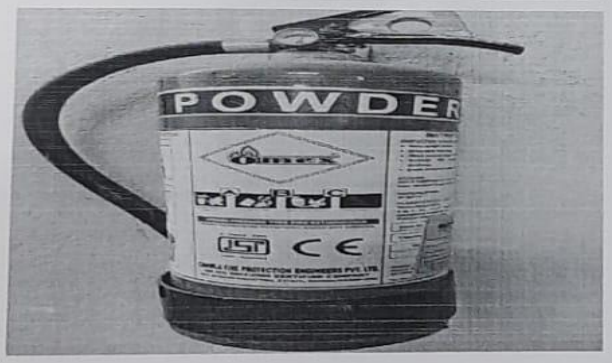

Convener

Teacher-in-Charge

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