

# **K. K. Das College**

**GRH – 17, Baishnabghata – Patuli**

**Kolkata – 700084**

**West Bengal**

**India**



## **CRITERION VII**

### **Institutional Values and Best Practices**

#### **Key Indicator**

#### **7.1. Institutional Values and Social Responsibilities**

#### **7.1.3 Green Audit/Environmental Audit Report from recognized bodies**

# Green Audit Report (2023-24) of K. K. Das College



**GRH-17, Baishnabghata-Patuli, Garia,**

**Kolkata – 700084**

**Email- [kkdascollege@gmail.com](mailto:kkdascollege@gmail.com)**



যাদবপুর বিশ্ববিদ্যালয়  
কলকাতা-৭০০০৩২, ভারত



\*JADAVPUR UNIVERSITY  
KOLKATA-700 032, INDIA

**Preamble:** K K Das College initially conceptualized in 1964 as K K Das College of Commerce situated in Patuli, Garia is an admirable College. With student strength of nearly 1325, it is very much vibrant in nature. With a very much Energetic Principal and Dedicated Faculties and Staffs, the College is well equipped and nicely set to do much better in coming days. Rooms across the College are properly maintained. Toilets are observed to be hygienically clean and properly utilized. Students generally are from middle class and lower middle class background; some of them are first generation learner. The College thrives with appropriate vision and mission; develop students as a complete human being with skills and knowledge for lifelong learning. With this back drop the college authorities approached the undersigned to complete Energy and Green Audit required under NAAC framework for accreditation purpose. The undersigned visited the College several times and inculcated the Basic Requirements and Significance of Energy and Green Audit initially to the Principal and then to the Faculties and Staffs all of whom are observed to be knowledge thirsty and very much cooperative. It is observed that rationale of Energy and Green Audit has now been transmitted to the ever joyous students from their beloved teachers which the undersigned believes will be one of the best practice to become responsible Future Citizen, New Initiatives as regards common people around the College are being made and as a whole skill development, job oriented Short Term Courses are being planned. The undersigned is very much optimistic about the future of the K K Das College which will definitely prosper inside a futuristic Resilient and Sustainable society.

#### Energy Audit Report

1. After persuasion, now it is observed that Energy Saving Policy Document has been forwarded to the competent authority and permission has been obtained.
2. Now it is observed relevant direction for **switch off electrical appliances when not in use** are pasted in the appropriate switchboards and areas.
3. It is observed now that energy conservation plans and green initiative plans have been discussed with the students and other stakeholders. Further to note Governing Body of the college has been apprised of such initiatives and necessary resolutions have been taken in the Governing Body.

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\* Established on and from 24<sup>th</sup> December, 1955 vide Notification No.10986-Edn/IU-42/55 dated 6<sup>th</sup> December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXIII of 1955) followed by Jadavpur University Act, 1981 (West Bengal Act XXIV of 1981)

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4. Energy Volunteer Team has been made comprised of Faculties, Staffs and Students.
5. Single Line Diagram for electrical wiring for the whole college was directed to be made but not yet done.
6. Analysis of the Electricity Bills was requested to be made initially. It is now observed that such analysis has been provided. The Unit consumptions have been observed to be increased roughly from an average value of 2000 Unit in 2017 to 3000 unit during 2023 signifying excellent holistic developments. But the analyzed data and available papers are interesting to investigate. It is observed that there were some lacuna on parts of the college authorities to initiate energy conservation plan as regards Electricity consumption was concerned may be due to monetary involvements. But in later years energy efficient LED bulbs were purchased systematically to minimize Electricity Bills and long term systematic energy use planning is in place. (Annexure 1, Annexure 2)
7. It is observed that electrical purchase receipts are properly maintained by the college as required for energy audit.
8. Upon request, the college authority has provided total number of Light, Fans, Computer, Printer, ~~Copyers~~, ACs. They are advised further to go for energy efficient systems at the time of faulty appliance replacement. (Annexure 3)
9. It is now observed that a sketchy systematic plan for replacement of old electrical energy conservation appliances is put forward. The auditor is of the opinion that the systematic plan is connected to fund inflow; the Governing Body of the K K Das College may kindly take necessary appropriate steps for planned replacements so that monthly energy bill can be made comparatively lower. (Annexure 4)
10. The energy auditor is of the opinion that a VFS driven lift should be there inside the college for easy movements.

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11. It is reported that One Gas Cylinder (LPG) per month is generally used in canteen for students' food preparation. Apart from that Induction Cookers are used.
12. It is now reported that for a Solar Power System considering around 5000 Sq.Ft. area to be shed free at roof top, a 30 KW roof top solar system has been proposed to the Governing Body of the College
13. It is observed the energy footprints for most of the individuals of the college has been documented as regards commuting to the K K Das College is concerned.
14. It is observed that college authority is planning to replace presently running ceiling fans by energy efficient BLDC fans.
15. Connectivity of the electrical appliances to the electrical bill has to be made by the authority based on the hour of use. It is observed to be not done yet.

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Ref. No. ....

**CESC Electricity Consumption**

Annexure - 1, Energy Date .....20

Consumer No. 05282038011						
Year	Month	Load (kva)	Units Consumed	Net Amount	Remarks	
2017	January	17.6	1051	11300.00		
	February	17.6	2767	29410.00	Reading for Bill not done for January	
	March	17.6	2430	25880.00		
	April	17.6	2565	27310.00		
	May	17.6	2211	23580.00		
	June	17.6	1926	20570.00	due to summer recess	
	July	17.6	2158	22800.00		
	August	17.6	2343		24970 August & October	
	September	17.6	2761	29210.00		
	October	17.6	2443+3087	81850.00	bill for August & October 17 paid together	
	November	17.6	1985	21460.00		
	December	17.6	1881	19900.00		
2018	January	17.6	2174	22980.00		
	February	17.6	2631	27800.00		
	March	17.6	2619	27430.00		
	April	17.6	3010		31520.00	
	May	17.6	3010+2832	61720.00	bill for April & May paid together	
	June	17.6	3064	32400.00		
	July	17.6	3104	32500.00		
	August	17.6	3944	41290.00		
	September	17.6	3955	42110.00		
	October	17.6	3173	33300.00		
	November	17.6	372	3760.00	college was closed due to puja vacation	
	December	17.6	1949	20430.00		
2019	January	17.6	2174	22780.00		
	February	17.6	2631	27560.00		
	March	17.6	2547	26680.00		
	April	Extension of Load 10.00KW, Contract Demand (KVA): 11.79 Rs. 132885/-				
	April	17.6	3272	34260.00		
	May	21.2	3564	37410.00		
	June	21.2	2718	28570.00		
	July	21.2	3679	38610.00		
	August	21.2	3593	37710.00		
	September	21.2	3955	41500.00		
	October	21.2	3464	36370.00		
	November	21.2	0	550.00		
December	21.2	980	10550.00	green bill due to not paid November 19 bill		

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**CESC Electricity Consume**

Annexure - 1, Energy Date .....20

Consumer No. 05282038011					
Year	Month	Load (kva)	Units Consumed	Net Amount	Remarks
2020	January	21.2	1470	15890.00	due to winter season
	February				bill not received due to pandemic
	March				bill not received due to pandemic
	April	21.2		22320.00	
	May	21.2		950.00	
	June	21.2	3415	34910.00	pending amount included in bill due to pandemic
	July	21.2	1021	10550.00	
	August	21.2	943	9780.00	
	September	21.2			
	October	21.2	904	18950.00	green bill due to not paid September 20 bill
	November	21.2	912	9550.00	Covid 19 pandemic period
	December	21.2	1392	14700.00	Covid 19 pandemic period adjusted
2021	January	21.2	919	9540.00	Covid 19 pandemic period
	February	21.2	1388	14660.00	Covid 19 pandemic period adjusted
	March	21.2	3792	39800.00	Covid 19 pandemic period adjusted
	April	21.2			
	May	21.2	1659	34137.00	green bill due to not paid April 21 bill
	June	21.2	1587	16830.00	
	July	21.2	1215	12850.00	
	August	21.2	1294	13680.00	
	September	21.2	1850	19490.00	
	October	21.2	533	5590.00	puja vacation
	November	21.2	1818	19160.00	
	December	21.2	1224	12940.00	
2022	January	21.2	1330	14050.00	
	February	21.2	1342	14170.00	
	March	21.2	1350	14260.00	
	April	21.2	4956	51900.00	Previous Bill adjusted
	May	21.2	1958	20570.00	
	June	21.2	2671	28030.00	
	July	21.2	2268	23810.00	
	August	21.2	3786	39680.00	
	September	21.2	2772	29590.00	
	October	21.2	2114	22260.00	
	November	21.2	2049	21750.00	
	December	21.2	1799	18940.00	

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Ref. No. ....

**CESC Electricity Consume**

Annexure - 1, Energy Date .....20

Consumer No. 05282038011					
Year	Month	Load (kva)	Units Consumed	Net Amount	Remarks
2023	January	21.2	2465	25910.00	
	February	21.2	1707	17980.00	
	March	21.2	3180	33380.00	
	April	21.2	3144	33000.00	
	May	21.2	2391	25130.00	
	June	24.9	3634	38220.00	
	July	24.9	3614	38010.00	
	August	24.9	3485	36660.00	
	September	24.9	3383	35600.00	
	October	24.9	1975	20810.00	
	November	24.9	1674	17740.00	
	December	24.9	1572	16670.00	

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Ref. No. ....

Date .....20

## Annexure – 2, Energy

### Long term systematic Planning

1. From 2015 Damaged Bulbs were replaced by CFL lamp.
2. From 2018 Tub lights and Bulbs were replaced by LED bulbs and Tube.
3. AC servicing is done twice in a year to reduce electrical consumption and enhance the efficiency and longevity of ACs.
4. Water tank are cleaned twice in a year.
5. Drinking water is under AMC and condition of drinking water is quite good as per their report.
6. Air condition is alarming in kolkata so the same condition in our College.
7. Clean campus drive is appreciated by other HEI.
8. Green imitative is a long term process started from 2015 and continuing still.
9. One switch operated system for rooms started from 2022 to reduce electrical consumption.

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10. Roof top solar plant will be installed after completion of 4th floor. ( 2026-

11. Biorety Garden will be made in future probably in the year 2026-2027.

12. Herbs from roof will be made by 2024-2025.

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Ref. No. ....

Annexure – 3, Energy  
Date .....20

List of Electrical Devices for Energy Audit

Sl. No	Item Name	Qty
1	AC 3 star	12
2	Biometric Device	1
3	Calling Bell	3
4	CCTV	26
5	Ceiling Fan	141
6	Ceiling LED	44
7	Computer	82
8	Exhaust Fan	6
9	Generator	1
10	Induction Oven	2
11	Laptop	7
12	LED Bulb	30
13	Microwave oven	2
14	Pedestrial Fan	3
15	Photocopier Machine	3
16	Printer	9
17	Projector	18
18	Refrigerator	1
19	Scanner	7
20	Tube Light 40w	5
21	Tube Light LED	145
22	TV	2
23	UPS	19
24	Wall Fan	8
25	Water Pump	1
26	Water Purifier	5

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Ref. No. ....

Date .....20

## Annexure – 4, Energy

### Systematic Plan for replacement of old Energy Consuming Appliances of K. K Das College

#### 1. Year – 2024

6 ACs, 30 Ceiling fans, 5 tube light 40w, 4 wall fans, 1 water pump, 20 computer, are planned to be replaced, provided money is available from the college authority.

#### 2. Year – 2025

4 ACs, 20 Computers, 3 exhaust fans, 1 microwave oven, 4 printers, 8 projectors, 4 wall fans are planned to be replaced, provided money is available from the college authority.

#### 3. Year – 2026

2 ACs, 50 Ceiling Fans, 20 computers, 3 exhaust fans, Energy efficient generator, 3 Pedestal Fan, 1 photocopier machine, 5 printers, 5 projectors are planned to be replaced, provided money is available from the college authority.

#### 4. Year – 2027


30 ceiling fans, 1 induction oven, 1 refrigerator, 3 scanner, 3 water purifier are planned to be replaced, provided money is available from the college authority.

#### 5. Year – 2028

30 ceiling Fans, 17 computers, 1 induction oven, 1 photocopier machine, 5 projector, 4 scanner, 2 water purifier are planned to be replaced, provided money is available from the college authority.

However parallel to the developments of the college, the authority pledged to procure all Energy Efficient Appliances in futures.

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K K Das College has attempted to remain Green as evidenced from its Systematic Tree Plantation across the College Boundary. Furthermore the Art Works at the College Boundary made by the Students are praiseworthy. With the requirement of Green Audit for NAAC, the following observations are made.

#### Green and Environment Audit Report

1. It is observed that regular cleaning of the underground water storage facility is done.
2. The Green auditor is of the opinion that through there exist a small water harvesting facility, it should be augmented with proper design so that utility of such facility can be thoroughly realized.
3. It is observed now that several varieties of plants are visible inside the K K Das College Campus. List of such plants with their scientific name has been provided (Annexure 1, Green Audit).
4. It is observed now that several varieties of creatures are visible inside the K K Das College Campus. Scientific names of such are now prepared. (Annexure 2, Green Audit).
5. The Green Auditor is of the Opinion that there exists ample scope to go for Medicinal Plant Garden inside the Campus. The College Authority has been advised for to go for a Medicinal Plant Garden. (Annexure 3, Green Audit, List of medicinal plants to be prepared and placed to G.B)
6. It is observed that hot water in the canteen is environmentally disposed of after proper cooling.
7. It is observed that Air quality inside the college is more or less same that of the adjoining State Highway but it is very much alarming, with high AQI sometimes at 226 . The college authority has been advised by the Green Auditor to initiate steps to minimize Suspended Particulate Matter inside the college by arresting such by creating herbal plant networks across the college windows. Further attention is sought from the college authority to device scopes of minimizing PM 10, SO<sub>2</sub>, NO<sub>2</sub>, CO etc inside the College Campus.

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Kolkata - 700 106

\* Established on and from 24<sup>th</sup> December, 1955 vide Notification No.10986-Edn/IU-42/55 dated 6<sup>th</sup> December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXIII of 1955) followed by Jadavpur University Act,1981 (West Bengal Act XXIV of 1981)

দূরভাষ: ২৪১৪-৬৬৬৬/৬১৯৪/৬৬৪৩/ ৬৪৯৫/৬৪৪৩  
দূরবার্তা: (৯১)-০৩৩-২৪১৪-৬৪১৪/২৪১৩-৭১২২

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যাদবপুর বিশ্ববিদ্যালয়  
কলকাতা-৭০০০৩২, ভারত



\*JADAVPUR UNIVERSITY  
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8. It is found that Segregated Waste Disposal Systems are working
9. It is also observed that E-waste disposals Systems are in place.
10. No Chimney for Combustion Gas Disposal is observed. The K K Das College authority is advised to set up a chimney system to vent out gases from the Canteen
11. Policy documents regards Green Campus and Plastic free campus is available (Annexure 3, Green Audit)
12. Bills of manual labour of tank cleaning and water conservation are made available to the auditor
13. Beyond the campus environmental promotions by the college such as tree plantation, dengue prevention with Kolkata Municipal Corporation is distinctly visible. It is observed that the College Authorities has initiated the process of Water Harvesting inside the College. Though the attempt is trivial but deserves special recognition. It is advised to go for proper Water Management Harvesting Facilities to recycle water inside the K K Das College Campus.
14. Upon repeated request Drinking water sampling data could not be obtained. It is advised to go for such data for analyzing Bacterial and Microbial presence inside the water if any as well as for dissolved salts harmful to human health. However a sketchy Aquaguard service data indicating TDS count of 201 is available.

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**K. K. DAS COLLEGE**

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Annexure - 1, Green Audit  
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Plants Identified inside the College Campus by the Department of Botany, Vijaygarh Jyotish Roy College on 15.01.2024

Sl. No.	Scientific Name	Family	Local name of the plant	Number of Plants
1.	<i>Sansevieria Trifasciata</i>	Asparagaceae	snake plant or mother-in-law's tongue,	32
2.	<i>Liebgis Sansevaria</i>	Asparagaceae	Snake plant	27
3.	<i>Aglaonema sp</i>	Araceae	Chinese evergreen	6
4.	<i>Barleria prionitis</i>	Acanthaceae	Kanta jati	1
5.	<i>Codiaeum variegatum</i>	Euphorbiaceae	Garden Croton	1
6.	<i>Rhychosia viscosa</i>	Solanaceae	Sticky stoutbean	1
7.	<i>Catharanthus roseus</i>	Apocynaceae	Nayantara	1
8.	<i>Ixora sp</i>	Rubiaceae	Rangan	15
9.	<i>Nyctanthes Arbor-tristis</i>	Nyctanthaceae	Shiuli	2
10.	<i>Aloe barbadensis</i>	Liliaceae	Chritakumari	15
11.	<i>Tabernaemontana sp</i>	Apocynaceae	Tagar	4
12.	<i>Jasminum sp</i>	Oleaceae	Jasmine	6
13.	<i>Atrocarpus sp</i>	Moraceae	Kathal	1
14.	<i>Hibiscus rosa-sinensis</i>	Malvaceae	Joba	6

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Convener, Eco-Club  
 22/01/24



N. Mondal 25.01.24  
 IQAC Co-ordinator  
 K. K. Das College  
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 Garia, Kolkata - 700 084

Dr. Ramkrishna Prasad Chakraborty  
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15.	<i>Bougainvillea glabra</i>	Caryophyllaceae	Kagaj ful	1
16.	<i>Coleus blumei</i>	Labiatae	Coleus	4
17.	<i>Andrographis Paniculata</i>	Acanthaceae	Kalmegh	4
18.	<i>Nerium indicum</i>	Apocynaceae	Karabi	4
19.	<i>Murraya oenigii</i>	Rutaceae	Curry leaves	1
20.	<i>Philodendron sp</i>	Areceae	Money plant	1
21.	<i>Carica papaya</i>	Cucurbitaceae	Papaya	1
22.	<i>Cycas sp</i>	Cycadaceae	Cycas	2
23.	<i>Dracaena sp</i>	Asparagaceae	Dragon tree	2
24.	<i>Ocimum sanctum</i>	Labiatae	Tulshi	5
25.	<i>Azadirata indica</i>	Meliaceae	Neem	1
26.	<i>Areca sp</i>	Palmae	Betel palm	3
27.	<i>Syzygium cumini</i>	Myrtaceae	Jamun	1
28.	<i>Thuja sp</i>	Gymnosperms	Cedar	3
29.	<i>Delonix regia</i>	Fabaceae	Krishnachura	3
30.	<i>Anthocephalus chinensis</i>	Rubiaceae	Kadam	1
31.	<i>Psidium guajava</i>	Myrtaceae	Peyara	1
32.	<i>Annonus squamosus</i>	Annonaceae	Sitaphal	1
33.	<i>Swietenia macrophila</i>	Maliaceae	Mehagani	1

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34.	<i>Euphorbia tirukali</i>	Euphorbiaceae	Milk bush	1
35.	<i>Trachyspermum ammi</i>	Apiaceae	Ajwain	4
36.	<i>Plumeria alba</i>	Apocyanaceae	Kathgolop	1
37.	<i>Swetenia mehagini</i>	Maliaceae	Mehagini	2
38.	<i>Hibiscus mutabilis</i>	Malvaceae	Sthlapadma	1
39.	<i>Bryophyllum</i>	Crassulaceae	Patharkuchi	1
40.	<i>Ficus elastic</i>	Moraceae	Rubber fig	1
41.	<i>Aurocaria heterophylla</i>	Gymnosperms Aurocariaceae	Christmas tree	2
42.	<i>Ficus sp</i>	Moraceae	Figs	1
43.	<i>Ficus bengalensis</i>	Moraceae	Banyan tree	1
44.	<i>Rhoeo discolor</i>	Commelinaceae	Rhoeo	2
45.	<i>Clitoria ternatea</i>	leguminosae	Aparajita	1
46.	<i>Hylocereus costaricensis</i>	Cactaceae	Dragon Fruit	6
47.	<i>Phoenix sylvestris</i>	Areaceae	Palm,	2

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Ref. No. ....

Annexure-2, Green Audit

### List of creatures in K.K.Das College

১. কাক। Crow

*(Corvus splendens)*

২. কাঠবেড়ালি। Squirrel

*(Funambulus palmarum)*

৩. সাপ। Snake

৪. প্রজাপতি Butterfly

*(Rhopalocera,)*

৫. ইঁদুর rat

৬. মশা mosquito

৭. মাছি Fly

৮. চড়াই পাখি sparrow

*(Passer domesticus indicus)*

৯. শালিক common myna

*(Acridotheres tristis)*

১০. কেঁচো Earthworm

*Lumbricus (Genus)*

১১. বাবুই পাখি Baya Weaver

*(Ploceus philippinus)*

১২. কাঠঠোকরা (Woodpecker),

১৩. ঘুঘু পাখি Doves

১৪. টিয়া parrot

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১৫. কোকিল Cuckoo

*(Cuculus clamosus)*

১৬. ব্যাং Frog

১৭. কেব্লা Miilipede

১৮. টিকটিকি /গিরগিটি Lizard

১৯. হলুদ বসন্ত Black hooded oriole

২০. সিপাহি বুলবুল Red whiskered

২১. মৌমাছি Bee

২২. আরশোলা Cockroach

২৩. কুকুর Dog (*Canis lupus familiaris*)

২৪. বিড়াল Cat

২৫. ভাম বিড়াল Civet Cat

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২৬. বোলতা Wren

*30/11/24*

Principal  
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Annexure - 3, Green Audit

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Plants Identified inside K.K.Das College Campus by the Department of Botany, Vijaygarh Jyotish Roy College on February 2023 (Medicinal)

Serial no.	Common name	Scientific name	Family	uses
1,3,4	Krishnachura	Caesalpinia pulcherrima	Caesalpinaceae	used as fuel. um used as a binding agent ,used in textile industry, tanning industry.
2	Kadam	Anthocephalus chinensis	Rubiaceae	Powerful antioxidant. ,reduce the risk of cancer. ..reduces risk of heart diseases. ... Helps in the management of diabetes. ...
5	Kalojum	Syzygium cumini	Myrtaceae	antidiabetic
6	Bilati Jhau	Casuarina equisetifolia	Casuarinaceae	It exerted many pharmacological activities including antimicrobial, antidiabetic, antioxidant, cytotoxic, hypolipidemic, gastroprotective, hepatoprotective and many other pharmacological effects
7	Mango	Mangifera indica,	Anacardiaceae	Mango is rich in vitamins, minerals, and antioxidants, having anticancer effects, improved immunity and digestive and eye health, to reduce inflammation of the heart. can help stabilize digestive system.
8	Kalmegh	Andrographis paniculata	Acanthaceae	Antidiabetic
9	Dracaena	Dracaena sp	Asparagaceae	Dracaena is one of the indoor plants that help reduce indoor pollution levels. Increase humidity: ∴ The plant releases water vapour and increases

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N. Munshi  
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				moisture levels in air, thus, reducing dry-air conditions
10	Betel nut	<i>Acacia catechu</i>	Fabaceae	The extract of this plant is used to treat sore throats and diarrhoea, also useful in high blood pressure, dysentery, colitis, gastric problems, bronchial asthma, cough, leucorrhoea and leprosy. It is used as mouthwash for mouth, gum, sore throat, gingivitis, dental and oral infections
11	Palm	<i>Areca sp</i>	Arecaceae	
12	Shiuli	<i>Nyctanthes arbor-tristis,</i>	Oleaceae	
13	Satamuli	<i>Asparagus racemosus</i>	Asparagaceae	roots have been used as a remedy for schistosomiasis and tuberculosis..
14	Kata mehendi	<i>Durantarepens</i>	Verbenaceae	
13	Guava	<i>Psidiumguajava</i>	Myrtaceae	
14	Mehagoni	<i>Swieteniamacrophylla,</i>	Meliaceae	
15	Guava	<i>Psidiumguajava</i>	Myrtaceae	People use guava leaf for stomach and intestinal conditions, pain, diabetes, and wound healing.
16	Rangan	<i>Ixora</i>	Rubiaceae	
17	Curry leaves	<i>Murrayakoenigi</i>	Rutaceae	Powerful antioxidant. ..may reduce the risk of cancer. , ..reduces risk of heart diseases. ..Helps in the management of diabetes. .Help deal with stomach ailments.
18				
19	Papaya	<i>Carica papaya</i>	Caricaceae	Papaya is used for preventing and treating gastrointestinal tract disorders, intestinal parasite infections, and as a sedative and diuretic. It is also used for nerve pains

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21	Mother-in-law's tongue	<i>Sansevierasp</i>	Asparagaceae	
22	Neem	<i>Azadiractaindica</i>	Meliaceae	neem tree- leaves, flowers, seeds, fruits, roots and bark have been used traditionally for the treatment of inflammation, infections, fever, skin diseases and dental disorders.
23	Mehagani	<i>Swetiniamehagini</i>	Meliaceae	
24	Jackfruit	<i>Artocarpusheterophilous</i>	Moraceae	It is a good source of fiber, help keep bowel movements regular.Ulcers..Diabetes.High blood pressure.,Skin problems.
25		<i>Abutilon indica</i>	Malvaceae	
26		<i>Achyranthusaspera</i>	Amaranthaceae	
27	<i>RudraPalas</i>	<i>Spathodiacampanulata</i>	Bignoniaceae	
28	<i>Dalim</i>	<i>Punicagranatum</i>	Punacaceae	
29	<i>Chatim</i>	<i>Alstoniascholaris</i>	Apocynaceae	Used for pyorrhoea, pimple, urinary diseases, leprosy, fever, cough, cold, worm, asthma, used to treat a variety

*mah*  
3.3.23

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*N. Munshi* 3.3.23

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*CA*  
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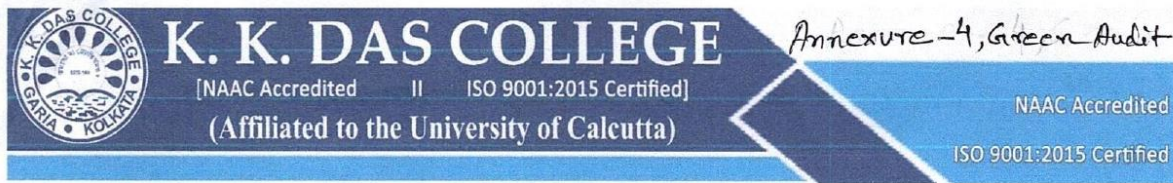
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## GREEN INITIATIVE AND ENERGY CONSERVATION POLICY DOCUMENT

Clean and Green, plastic free environment is the basic need of the time. With this vision K.K.DAS College gives an extra effort through its policies.

The college has specific policies, which are implemented and guided by our Principal and IQAC. The college believes it is very important for the students to understand the value of the green and clean environment for their future existence. This can help them to grow as a complete human being with a holistic mind. It is the policy of the college to ensure a green initiative venture by the involvement of all stakeholders. The students, teaching staff as well as the non-teaching staff participate regularly for mentioning green zone as well as a green and purified environment. The eco club along with NSS unit of the College who are the green and energy Volunteer take the initiative of optimal conservation of energy maximum green plantation and clean campus plastic free zone.

"Each one plant one" is the quality policy of the College.

To achieve the goal of objectives following steps are taken:

1. To organise awareness programmes for the students, faculty and society.
2. Conduct an Annual Green and Environmental audit.
3. To spread consciousness not only within the college campus but beyond the college campus.
4. To attempt and ensure a carbon free environment for the college.
5. Protocols are maintained of restrictions of automobiles and plastic free zones

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*CR* 14/05/22


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# K. K. DAS COLLEGE

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(Affiliated to the University of Calcutta)

NAAC Accredited


ISO 9001:2015 Certified

Like the Green initiative K.K. Das college is also very much aware of the energy conservation policies.

There are a group of dedicated energy volunteers ,who are in charge of inspecting the day to day practices of the college. Apart from the volunteers a designated person is appointed for overall inspection.

The objectives of energy conservation policy

1. To aware the students and faculties about the importance of energy conservation.
2. To conduct the energy audit.
3. To turn off the monitor when it is not in use.
4. To turn off unnecessary light and use of the day light instead.
5. To avoid the use of decorative light
6. Phase out of CFL and instead of that use LEDs.
7. No smoking zone.

  
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3/2



# Green Audit Report (2022-23) of K. K. Das College



**GRH-17, Baishnabghata-Patuli, Garia,**

**Kolkata – 700084**

**Email- [kkdacollege@gmail.com](mailto:kkdacollege@gmail.com)**



### 1. Introduction:

The results and conclusions and suggestions from a thorough green audit carried out at K.K. Das College are presented in the report that continues. The audit's goals were to evaluate the college's environmental impact and spot areas where sustainability may be improved. The audit addressed topics like journeys, disposal of trash, water use, electricity consumption, and general environmental awareness.

### Energy Volunteer of K. K. Das College (2023-24):

Sl No	Name of the Members	Designation
1	Dr.Ramkrishna Prasad Chakraborty	Principal
2	Dr.Sreyashi Sarkar	Teacher Member
3	Dr. Mohan BirSubba	Teacher Member/ Convenor of Eco Club
4	Mr.Sudip Das	Non-teaching Member
5	Mrs.AratiMajumder	Non-teaching Member
6	Mr. Kishore Das	Non-teaching Member
7	Ranjoy Sarkar	BA Bengali Hons (Sem V)
8	BarshaPramanik	BA General (Sem V)
9	Imraj Mondal	BA General (Sem V)
10	ArpitaNaskar	BA General (Sem V)
11	SarajDey	BA General (Sem III)
12	BristyNaskar	BA General (Sem I)
13	Suman Mondal	BSc General (Sem V)
14	Soumitra Mondal	BSc General (Sem V)
15	Neha Das	BSc General (Sem I)
16	Rajlakshmi Roy	BA English Hons (Sem V)
17	ItuAdhikary	BA English Hons (Sem V)
18	SoumajitMitra	BComHons (Sem V)
19	Rupankar Ghosh	BCom Gen (Sem I)
20	Misty Roy	BA Hons (Sem I)
21	JyotiSapui	BA Hons (Sem III)
22	Joy Tikader	BA Hons (Sem V)





## 2. Need for Green Audit:

Green audits, also known as environmental audits or sustainability audits, are becoming more and more necessary in today's society for several reasons:

**(a) Environmental Impact:** Green audits assist in evaluating and reducing an organization's negative environmental impact. They assess variables like energy use, waste production, water use, and emissions, identifying areas that might be improved to lessen environmental harm.

**(b) Regulatory Compliance:** Businesses must abide by the environmental laws and standards that have been set in many nations. Green audits assist businesses in complying with regulations and avoiding fines or other legal repercussions for non-compliance.

**(c) Cost Reduction:** Green audits can reveal inefficiencies and wasteful behaviours within a company, opening up chances for cost savings. Businesses can apply methods to save operational costs and boost overall efficiency by analyzing energy usage, resource consumption, and waste management.

**(d) Reputation and Stakeholder Expectations:** Consumers and other stakeholders now demand more environmentally conscious company practices. Green audits offer organization transparency and prove its dedication to sustainability, strengthening its reputation and fostering trust among clients, staff, investors, and communities.

**(e) Risk Management:** Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.

**(f) Continuous Improvement:** Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and



tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.

**(g) Sustainable Development Goals (SDGs):** An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. To evaluate, enhance, and confirm environmental performance, green audits are essential. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

### 3. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

- (a) Planning:
- (b) Identify audit team and resources:
- (c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.
- (d) Data Collection:
- (e) Gather information:
- (f) Conduct site visits and interviews:
- (g) Review documentation:
- (h) Evaluation and Analysis:
- (i) Assess environmental impacts:
- (j) Evaluate compliance:
- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:
- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:



- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

### **3.1. On-site Visit :**

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

### **3.2. Focus Group Discussion :**

The Eco Club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

### **3.3. Energy and waste management Survey:**

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

## **4. Target Areas of Green Auditing:**

A process for resource management includes a green audit. The actual usefulness of green audits lies in the fact that they are conducted at predetermined intervals and that the results might show improvement or change over time, even though they are individual events. The concept of an eco-campus primarily emphasizes



the effective use of energy and water, the reduction of waste output or pollution, and economic efficiency.

These indications are evaluated during the "Green Auditing of this Educational Institute" procedure. In order to reduce emissions, obtain a reliable and affordable energy supply, promote personal responsibility, encourage and improve energy conservation, reduce the institute's energy and water use, reduce waste going to landfills, and incorporate environmental considerations into all contracts and services deemed to have significant environmental impacts, Eco-campus focuses on these goals. Water, energy, trash, and green campus are the focus topics for this green audit.

**4.1. Energy Consumption:**

**4.1.1. Lighting:**The audit showed that many of the college's lighting fixtures were ineffective and outdated. It is advised to use natural light whenever possible, add occupancy sensors, and swap out conventional light bulbs for energy-efficient LED ones.

**4.1.2. Heating, Ventilation, and Air Conditioning (HVAC):**

The HVAC systems were discovered to be working less efficiently than necessary. Energy usage can be considerably decreased by switching to energy-efficient HVAC equipment, using programmable thermostats, and performing routine maintenance.

**4.1.3. Energy Awareness:**The college should promote energy conservation practices among employees and students. Campaigns, educational activities, and financial incentives for energy-saving projects can all help achieve this.

Electrical device/items	Number	Power (Kilo watt)	Usage time
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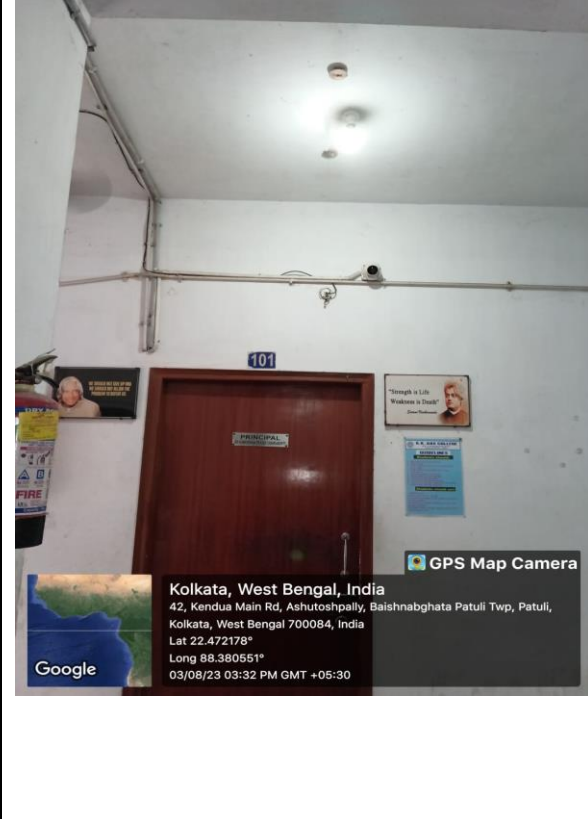
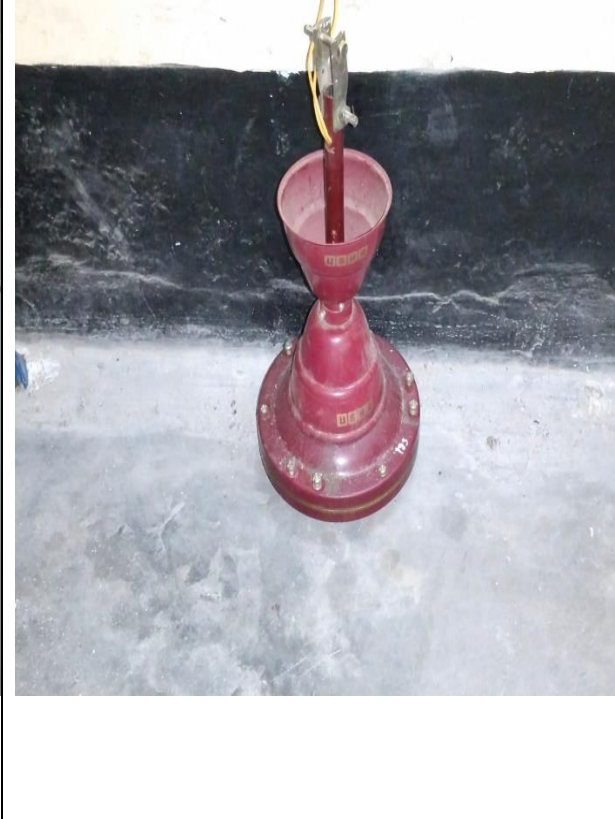


AC 3 star	12	13.25 kW	7hrs/day during summer months
Biometric Device	1	0.003 kW	7 hrs/day
Calling Bell	3	0.3 kW	7 times/day
CCTV	26	0.01 kW	24 hrs/day
Ceiling Fan	141	10.57 kW	7hrs/day
Ceiling LED	44	2.64 kW	do
Computer	77	7.7 kW	4 hrs/day
Exhaust Fan	6	0.18 kW	Occasional
Generator	1	66 kW	Occasional
Induction Oven	2	2 kW	30 min/day
Laptop	8	0.4 kW	7hrs/day
LED Bulb	30	450 kW	7hrs/day
Microwave oven	2	1.2 kW	30 min/day
Pedestal Fan	3	0.18 kW	2hrs/day
Photocopier Machine	2	1.6 kW	2hrs/day
Printer	9	0.36 kW	2hrs/day
Projector	18	9 kW	1hr/day
Refregerator	1	113 kW	7hrs/day
Scanner	7	0.08 kW	1hr/day
Tube Light 40w	5	0.2 kW	7hrs/day
Tube Light LED	145	2.18 kW	7hrs/day
TV	2	0.14 kW	4hrs/day
UPS	19	570 kW	4hrs/day
Wall Fan	8	0.4 kW	5hrs/day
Water Pump	1	1.5 kW	2hr/day
Water Purifier	5	0.25 kW	7hrs/day



**In many classroom places, we must replace common tubes with low-wattage LED Bulbs instead. We obtain sufficient illumination with low-wattage led tubes. As a result of this, we conserve power. *Note:* The fact that all of the power switches are on demonstrates that the electrical equipment is being maintained properly.**



	
<p><b>LED Bulb &amp; save energy</b></p>	<p><b>Performing routine maintenance on electrical fans. The accumulation of dust and debris can hinder the fan's performance. Regular cleaning of the grilles, blades, and motor housing is necessary to maintain optimal operation, ensure smooth airflow &amp; save energy.</b></p>



**Silent DG sets are designed to generate a very low level of background noise, just as their name suggests. Their structures are constructed to eliminate virtually all noise and vibrations due to careful design. Because of this, they are not harmful to the environment and are ideally suited for use in residential areas.**

**4.2. Waste Management:**

**4.2.1. Recycling:** Although there were recycling containers all across the campus, the audit showed that there was a lack of effective separation and information about recyclable products. Increased recycling rates can be achieved by upgrading signage, giving clear instructions and implementing a comprehensive recycling education programme.

**4.2.2. Composting:** The institution can set up a composting system to handle the organic waste. Composting can help drastically reduce the quantity of garbage dumped in landfills while also producing beneficial compost for campus landscaping and gardening.

**Table: Different types of waste generated in the college and their disposal**

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Store these in a separate tank, and we can start selling them directly after a certain amount of time.





Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Items made of plastic that are only intended to be used once, such as bottles, jars, and bags. Encourage people to use water bottles and other containers that may be reused. Establish distinct recycling containers for plastic garbage, and after a predetermined period of time, we will be able to begin selling the collected recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Reuse after maintenance energy conversion. Installing composting systems on a college campus will allow for the conversion of discarded food into nutrient-dense compost that may be used in the campus landscaping or in community gardens. Another option is for institutions to form partnerships with farmers in the surrounding area to collect food waste.
Wastewater	Washing, urinals, bathrooms	Soak pits
Sanitary Napkin	-	Napkin Incinerators



### 4.3. Water Usage:

**4.3.1. Water Fixtures:** Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

#### Water management table:

Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

#### Tabular data detailing the subject at hand:

Sl No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (1500 sqft) & Rain Harvesting Water <b>Note:</b> The ground's water serves as a drinking water supply for around 4,500 people, including students and staff members.
2	Source of Drinking Water	Ground's water



3	Any treatment for drinking water	Nil <b>Note:</b> Water purifiers have been installed in 1-2 numbers on each floor and are maintained for 3–4 months afterward.
4	What is the total number of motors that are used?	01 numbers
5	What is the total number of water tanks? Capacity of tank	2 numbers @ 1000 liters each 1 number @ 20,000 litre
6	Tap water	50 numbers
	Quantity of water pumped every day	18000 liters/per day
7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	100liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	Yes
11	The number of units harvested and the total volume of water	01 number, We have connected a 1000 litre tank with the terrace via a pipe to collect rainwater.
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable
14	Is there any kind of plan for the management of water?	Raise public awareness regarding the importance of water conservation, the prevention of pollution, and the implementation of sustainable water management practices. Unambiguous



		water rights and equitable water allocation regulations should be established to ensure that water is distributed fairly among the many different users.
15	Have any methods for conserving water been implemented?	Rainwater Harvesting

**5. Transportation:**

**5.1. Public Transport:** The college's carbon footprint can be significantly reduced by encouraging employees and students to use public transport. Sustainable transport solutions can be promoted by offering cheap bus passes, encouraging carpooling, and supporting bicycle infrastructure.

	<b>Students</b>	<b>Employee</b>	<b>Total</b>
	Average numbers over 6 days in a peak session		
<b>Bicycles are being used as modes of transportation for getting to and around the college by students, non-teaching staff and teaching staff.</b>	Girls- 20 Boys-50	5	75

**5.2. Electric Vehicles:** To aid in the switch to electric transport, the college may choose to invest in infrastructure for charging EVs. Additionally, encouraging the use of electric vehicles through awareness programs and incentives can help lower the emissions produced by on-campus transportation.



**Scooter with an electric motor that is utilized by a member of the college's faculty. There are large numbers of electric motor cycles that both our pupils and our employees use.**

**6. Overall Environmental Awareness:**

**6.1. Curriculum Integration:**The institution can integrate environmental awareness and sustainability into its curriculum across various subject areas. This strategy will guarantee that students receive instruction and training in environmental stewardship, encouraging sustainable thinking.

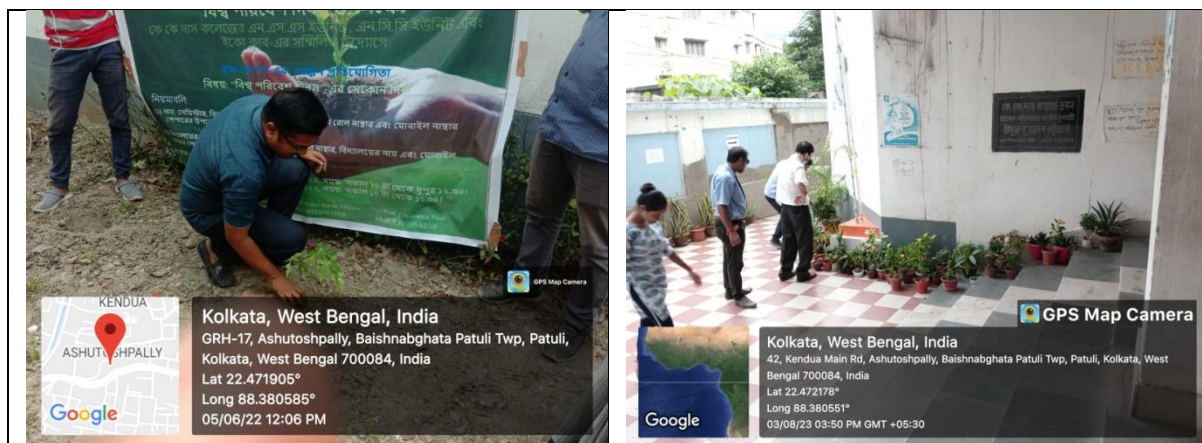
Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that	Whole year



	<p>apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.</p>	
Arts	<p>Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.</p>	Whole year
NSS	<p>To enhance the amount of green cover and fight deforestation, organizing tree-planting events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized. It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness</p>	Whole year



	<p>about environmental issues and motivate people to take action, you might use social media, posters, and booklets.</p>	
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**Plantation Programmes**

**6.2. Student Engagement:** A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops.

**7. Green Campus:**

**7.1. Floral Diversity:**

The following are some actions to take into account when setting up a plantation programme at your college:

- Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.
- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighborhood, check with the college administration or other appropriate authorities.



- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.
- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.
- Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.
- Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.
- After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.





**Floral Diversity of the Campus**





**Encourage participation from the pupils at the institution, faculty, and staff in the upkeep and preservation of the grassland. Volunteer programmes, instructional workshops, and awareness campaigns are all excellent avenues for accomplishing this goal. A wide variety of plant and animal species can thrive on grasslands. A grassland encourages biodiversity on campus by serving as a habitat for various plant and animal species, thereby contributing to the maintenance of ecological equilibrium. Grasslands can remove carbon dioxide from the air and store it in their soil, which contributes to the fight against climate change by lowering overall levels of greenhouse gases.**

### Various plants in the campus:

One garden is developed in our college premises. Besides a garden, the college also has a wide variety of other plants grown on ground and pots as much as the limited premise of the campus permits.

Plants Identified inside K.K.Das College Campus by the Department of Botany, Vijaygarh Jyotish Roy College on February 2023.

Serial no.	Common name	Scientific name	Family	uses
1	Krishnachura	Caesalpinia pulcherrima	Caesalpinaceae	used as fuel. um used as a binding agent ,used in textile industry, tanning industry.
2	Kadam	Anthocephalus chinensis	Rubiaceae	Powerful antioxidant. ,reduce the risk of cancer. ...reduces risk of heart diseases. ... Helps in the management of diabetes. ...
5	Kalojum	Syzygium cumini	Myrtaceae	antidiabetic
6	Bilati Jhau	Casuarina equisetifolia	Casuarinaceae	<i>It exerted many pharmacological activities including antimicrobial, antidiabetic, antioxidant,</i>



				<i>cytotoxic, hypolipidemic, gastroprotective, hepatoprotective and many other pharmacological effects</i>
7	Mango	<i>Mangifera indica,</i>	Anacardiaceae	Mango is rich in vitamins, minerals, and antioxidants, having anticancer effects, improved immunity and digestive and eye health, to reduce inflammation of the heart. can help stabilize digestive system.
8	Kalmegh	<i>Andrographis paniculata</i>	Acanthaceae	Antidiabetic
9	Dracaena	<i>Dracaena sp</i>	Asparagaceae	Dracaena is one of the indoor plants that help reduce indoor pollution levels. Increase humidity: ∴ The plant releases water vapour and increases moisture levels in air, thus, reducing dry-air conditions
10	Betel nut	<i>Acacia catechu</i>	Fabaceae	The extract of this plant is used to treat sore throats and diarrhoea, also useful in high blood pressure, dysentery, colitis, gastric problems, bronchial asthma, cough, leucorrhoea and leprosy. It is used as mouthwash for mouth, gum, sore throat, gingivitis, dental and oral infections
11	Palm	<i>Areca sp</i>	Areaceae	
12	Shiuli	<i>Nyctanthes arbor-tristis,</i>	Oleaceae	
13	Satamuli	<i>Asparagus racemosus</i>	Asparagaceae	roots have been used as a remedy for schistosomiasis and tuberculosis..



14	Kata mehendi	<i>Durantarepens</i>	Verbenaceae	
13	Guava	<i>Psidiumguajava</i>	Myrtaceae	
14	Mehagoni	<i>Swieteniamacrophylla,</i>	Meliaceae	
15	Guava	<i>Psidiumguajava</i>	Myrtaceae	People use guava leaf for stomach and intestinal conditions, pain, diabetes, and wound healing.
16	Rangan	<i>Ixora</i>	Rubiaceae	
17	Curry leaves	<i>Murrayakoenigii</i>	Rutaceae	Powerful antioxidant. .may reduce the risk of cancer., ..reduces risk of heart diseases. ..Helps in the management of diabetes. .Help deal with stomach ailments.
18	Papaya	<i>Carica papaya</i>	Caricaceae	Papaya is used for preventing and treating gastrointestinal tract disorders, intestinal parasite infections, and as a sedative and diuretic. It is also used for nerve pains
19	Cactus	<i>Opuntiasp</i>	Cactaceae	
20	Mother-in-law's tongue	<i>Sansevierasp</i>	Asparagaceae	.
21	Neem	<i>Azadiractaindica</i>	Meliaceae	neem tree- leaves, flowers, seeds, fruits, roots and bark have been used traditionally for the treatment of inflammation, infections, fever, skin diseases and dental disorders.
22	Mehagini	<i>Swetiniamehagini</i>	Meliaceae	



23	Jackfruit	Artocarpusheterophilous	Moraceae	It is a good source of fiber, help keep bowel movements regular.Ulcers..Diabetes.High blood pressure.,Skin problems.
24		<i>Abutilon indica</i>	Malvaceae	
25		<i>Achyranthusaspera</i>	Amaranthaceae	
26	<i>RudraPalas</i>	<i>Spathodiacampanulata</i>	Bignoniaceae	
27	<i>Dalim</i>	<i>Punicagranatum</i>	Punacaceae	
28	<i>Chatim</i>	<i>Alstoniascholaris</i>	Apocynaceae	Used for pyorrhea, pimple, urinary diseases, leprosy, fever, cough, cold, worm, asthma, used to treat a variety

### Number of Plants in the Campus:

Sl. No.	Scientific Name	Family	No. of Plants
1.	<i>SansevieriaTrifasciata</i>	Asparagaceae	32
2.	<i>LiebgisSansevaria</i>	Asparagaceae	27
3.	<i>Aglaonema</i>	Araceae	6
4.	<i>BarleriaPrionitis</i>	Acanthaceae	1
5.	<i>CodiaeumVariegatum</i>	Suphorbiaceae	1
6.	<i>RhychosiaViscosa</i>	Solanaceae	1
7.	<i>CatharanthusRoseus</i>	Apocynaceae	1
8.	<i>Ixora</i>	Rubiaceae	15
9.	<i>NyctanthesArbor-tristis</i>	Nyctanthaceae	2
10.	<i>Aloe Barbadensis</i>	Liliaceae	15
11.	<i>Tabernaemontana</i>	Apocynaceae	4
12.	<i>Jasminium</i>	Oleaceae	2
13.	<i>Atrocarpus</i>	Moraceae	1
14.	<i>Hibiscus Rosa-sinensis</i>	Malvaceae	6
15.	<i>BouganvilleaGlabra</i>	Caryophyllaceae	1
16.	<i>Coleus</i>	Labiatae	4
17.	<i>AndrographisPaniculata</i>	Acanthaceae	4
18.	<i>NeriumIndicum</i>	Apocynaceae	4



19.	MurrayaCoenigii	Rutaceae	1
20.	Philodendron	Areceae	1
21.	Carica Papaya	Cucurbitaceae	1
22.	Cycus	Cycadaceae	2
23.	Dracaena	Asparagaceae	2
24.	Ocimum Sanctum	Labiatae	5
25.	AzadirataIndica	Meliaceae	1
26.	Areca	Plmae	3
27.	SyzygiumCumini	Myrtaceae	1
28.	Thuja	Gymnosperms	3
29.	DelonixRegia	Fabaceae	3
30.	AnthocephalusChinensis	Rubiaceae	1
31.	PsidiumGuajava	Myrtaceae	1
32.	AnnonusSquamosus	Annonaceae	1
33.	SwetoeniaMacrophila	Maliaceae	1
34.	Euphorbia Tirukali	Suphorbiaceae	1
35.	Trachyspermumammi	Apiaceae	4
36.	Plumeria Alba	Apocyanaceae	1
37.	SweteniaMehagini	Maliaceae	2
38.	Hibiscus Mutabilis	Malvaceae	1
39.	Bryophyllum	Crassulaceae	1
40.	FicusElastica	Moraceae	1
41.	AurocariaHiterophylla	Gymnosperms Aurocariaceae	2
42.	Ficus	Moraceae	1
43.	FicusBengalensis	Moraceae	1
44.	RhoeoDiscolor	Commelinaceae	2
45.	ClitoriaTernata	leguminosus	1
46.	Hylocereus	Cactaceae	6
47.	Phoenix Sylvestris	Areceae	2

## 7.2. Faunal Diversity:

Studying faunal diversity can increase awareness about environmental challenges and conservation's significance. Colleges that are home to a wide variety of animal species may be more likely to adopt environmentally friendly policies and methods of operation to safeguard the campus environment and the people who live there.

Following is a list of various animals (mammals, aves, arthropods, etc) identified in the college campus:

### 1. Crow



- 2. Squirrel**
- 3. Snake**
- 4. Butterfly**
- 5. Field rat**
- 6. Mosquito**
- 7. House Fly**
- 8. Sparrow**
- 9. Starling**
- 10. Earthworm**
- 11. Tailor bird**
- 12. Woodpecker**
- 13. Doves**
- 14. Parrot**
- 15. Cuckoo**
- 16. Frog**
- 17. Miilipede**
- 18. Lizard**
- 19. Black hooded oriole**
- 20. Red whiskered**
- 21. Honey Bee**
- 22. Cockroach**
- 23. Dog**
- 24. Cat**
- 25. Civet**
- 26. Ant**
- 27. Wasp**



**8. Conclusion:**The K. K. Das College's green audit identifies some areas that should be improved to advance sustainability initiatives on campus. Reduced energy use, better waste management, optimized water use, sustainable transportation options, and raised environmental awareness can all result from implementing the suggested solutions. K. K. Das College can set an example of environmental stewardship for its students and contribute to a cleaner future by implementing these improvements.

**Audit Reported and conducted by “Management System Consultancy”**

**Auditor**





*Amalish Kr. Mandal*



## MANAGEMENT SYSTEM CONSULTANCY

### *Authorization:*

- National Safety Council Certified (EMS: Registered ID No. 20210701001, OH&S Auditor: Merit Certificate No. 20211013005)
- National Productivity Council Certified (Energy Management Auditor: Certificate No. N95P15C244453/EL/50)
- ISO 14001:2015 (Environment) (CQI-IRCA Delegate ID: 173839, Certificate No. 46957) Lead Auditor Certificate
- ISO 50001:2018 (Energy) (CQI-IRCA Delegate ID: 218048, Certificate No. ENR-00728617) Lead Auditor Certificate
- Certified PG Diploma in Environment and Sustainable Development (En Roll No-BU/13/706432) from Bundelkhand University.
- ISO 17020:2012 Competency certified from QCI (Certificate No. EQUEST/QCI/031023/06-001)
- National Productivity Council Certified (Sustainable Waste Management: Certificate No. N80P12C958750/EL/31)
- National Productivity Council Certified (Water Audit in Industries: Certificate No. N66P30C160424/EL/33)
- Quality Council of India (Solid Waste and Hazardous Waste Management Certification: Cert No. TCB/QCI/110623/02-001)
- United Nations Institute for Training and Research (E-Waste management Certification: Date of issue: 27.09.2021)
- United Nations Institute for Training and Research (Introduction to Green Economy Certification: Date of issue: 29.11.2021)
- United Nations Institute for Training and Research (Sustainable Development in Practice Certification: Date of issue: 11.09.2022)
- Verification of Carbon footprint Introduction cum Implementation Training Course (ISO 14064) from BSI (Cert No. ENR-01361999)