

GREEN AUDIT REPORT, 2024



RANI BIRLA GIRLS' COLLEGE

(Affiliated to The University of Calcutta)

38, SHAKESPEARE SARANI

KOLKATA: 700017 – West Bengal



By

Dr. S.S. Dash, Scientist F

Dr. Sudhir Kumar Yadav, Botanist

Shri Saniav Kumar, Botanist

Botanical Survey of India, Kolkata

(Ministry of Environment, Forest and Climate Change, Govt. of India)



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SUMMARY

The Green Audit, also referred to as an ‘*Environmental Audit*’ is the process of systematic identification, quantification, recording, reporting and analysis of components related to the environmental and eco-friendly approach of any establishments. Its main objective is to analyse and promote eco-friendly practices in the campuses with an aim to conserve biodiversity.

The rapid urbanization and economic and industrial development at local, regional, national and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutions which will lead to sustainable development. The National Assessment and Accreditation Council (NAAC) New Delhi has made it mandatory (Criteria # 7) that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility (CSR) of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures. Green Audit or Environment Audit focuses on the Carbon Footprint reduction measures being implemented by the College Management.

In accordance with the Green Campus Evaluation Plan, the **Principal, Rani Birla Girl’s College, Kolkata, West Bengal**, through its Internal Quality Assessment Cell (IQAC) requested the **Director, Botanical Survey of India, Kolkata** to conduct Green Audit of the campus *vide* **letter no. 312/Prin/2024, dated 19.01.2024 (Annex. 1)**.

In this regard, the scientific team of Botanical Survey of India, as a pioneer institution in the field of Plant Taxonomy and Floristic Survey, under the Ministry of Environment, Forest and Climate Change, Government of India, conducted Green Audit of the campus *vide* **letter no. BSI-295/1/2s024 – Tech. / 187, dated 15th March, 2024 (Annex. 1)**. The team visited the college campus on **16th March, 2024** and conducted a field survey. The information and baseline data provided by the Principal were reviewed and noted as background of this study. The team collected field data on floristic diversity of the campus along with other aspects as prescribed for the Green Audit. During physical verification, it was observed although, this college is a degree level college for imparting quality education in Arts stream only and also for Geography. Presently, the college does not have infrastructure for Science stream (Botany, Zoology, Physics, Chemistry, Maths, Environmental Science etc.). Even though, the college authority and the Internal Quality

Assessment Cell (IQAC) of the college have maintained and promoted many eco-friendly initiatives in its campus in well organised manner, in spite of very limited resources.

During visit to the campus, it was also observed that some of the departments are well developed and well equipped with instruments. Notably, the Geography department is well equipped with instruments and maps and has good infrastructure for undertaking sponsored projects. Similarly, the Physics and Chemistry departments have also many scientific instruments for supporting practical classes. The library section is well maintained in its limited available space. In order to save electricity, the LED bulbs were found in use, which is a good initiative. Similarly, for the conservation of the rain water, the college authority informed that, under CSR funds, the college is going to receive few water tanks as grants. Besides, for development of the Botanic Garden in the spare land, soil putting works was in progress, and the college authority informed that it is planned to develop a garden, if sufficient fund is available. Further, it is also observed that the college may be promoted for undertaking courses in Biological sciences (Botany, Zoology, Biotechnology etc.), if resources are available, which will help the college to maintain the botanic garden and also to implement the environmental and eco-friendly approached more effectively.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology included: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. It works on the several facets of 'Green Campus' including Plantation, Waste Management, Energy efficient measures and mapping of Biodiversity. With this in mind, the specific objectives of the audit was to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards. It can make a tremendous impact on student health and learning college operational costs and the environment.

The main findings of the present green audit of this college show that, in general, all the departments and students are aware about the importance and need of a green and eco-friendly measures and environmental conservation. It was also observed that several green practices such as maintaining botanic garden, planting trees in the campus, water

conservation and proper maintenance of waste etc. are followed in the campus. However, on detailed review, it was observed that, as the college resources such as area, manpower, buildings etc. are very limited, many of the practices followed in the college are still in nascent stage and needs further nurture.

The dedication of the College Authority, particularly the Principal, the Internal Quality Assessment Cell (IQAC), and the Department of Geography of the college is well reflected by observing the maintenance of its eco-friendly buildings and campus, and also high standards in curricular and co-curricular spheres of the institution, with its limited resources. It offers an ideal vision of education and responsive to the challenges of an emerging India in a globalized world, by bringing in a positive difference in the socio economic-educational status of the state and the nation.

INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric CO₂ from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

GENERAL PROFILE OF THE COLLEGE

RANI BIRLA GIRLS' COLLEGE, Kolkata was established in July 1961 as an undergraduate arts college affiliated to the University of Calcutta by the Hindusthan Charity Trust in the memory of Rani Jogeshwari Devi Birla to serve as a women's educational institution and to impart a comprehensive learning programme to its students within an enlightened, liberal and progressive milieu. Undergoing a remarkable transformation, this college departed from its initial apparatus of governance (by a private Trust) to function as an aided institution under the Government of West Bengal.

The institution holds the distinction of being the bearer of a teaching and learning legacy of more than six decades and has been relentless in its pursuit of excellence. This college has maintained good academic performance with consistency. Co-curricular training and value-orientation have been equally prioritized within the institutional agenda. The college is very conveniently located on Shakespeare Sarani and is easily accessible from both the A.J.C. Bose Road and Jawaharlal Nehru Road intersections of Shakespeare Sarani. It is adjacent to Bharatiya Bhasha Parishad and Macpherson Square.



Figure 1: Front view of the College from Main Road side



Figure 2: View of the College from inside the campus

Vision:

The college was established with an inspirational vision to serve as an ideal seat of learning aimed at promoting higher education and holistic development of young women learners of diverse social and economic background within a liberal, progressive and enlightened milieu.

Mission:

As a premier and reputed institution committed to the goal of women's empowerment through higher education, the institutional mission is oriented to motivating learners to achieve distinction in academic, administrative and cultural spheres and to venture into self-employment or entrepreneurship.

INTERNAL QUALITY ASSESSMENT CELL (IQAC)

The establishment of Internal Quality Assurance Cell (IQAC) by accredited institutions is a major step in pushing long-term quality standards. An essential component of the college's administration, the INTERNAL QUALITY ASSESSMENT CELL (IQAC) adds to the campus's quality culture. The journey of IQAC commenced on December 18, 2009. The IQAC strives to make sure that everyone who is involved upholds high standards so they can be in positions of leadership in the challenging climate of the future. It collaborates with administrators, non-teaching staff, teachers, and students to guarantee coordination and upkeep of quality.

The suitability of the facilities offered to stakeholders is assessed by the IQAC team. The IQAC team welcomes any fresh suggestions for raising the standard of instruction and research in postsecondary education. IQAC has a set course of action for every academic session.

Plan of action:

A Green Campus is a place where environmental friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. The green campus concept offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind. Keeping these facts in mind, the college's IQAC ensures to implement the Green Audit idea on campus as a regular activity, with the following goals in mind:

- To create and announce the college's green policy.
- To increase the stakeholders' knowledge and sensitivity of the various environmental issues and dangers that the college and its surroundings face.
- To establish a set of "green standards" that the college will always strive to meet.
- To have a professional third-party auditor provide expert advice on how to promote environmentally friendly operations.

GREEN AUDITING

The college has implemented the "Green Campus" concept to promote sustainability and environmental preservation. The three primary pillars are: 100% of graduates exhibiting environmental literacy; zero environmental footprint; and positive influence on occupant health and performance. Reducing energy, water, and CO₂ emissions while fostering a healthy and educational environment for students is the aim.

OBJECTIVES:

The Green Audit has gained significant importance in recent times for an institution's self-evaluation, as it indicates the institution's contribution to addressing the current environmental issues. Since its founding, the college has made an effort to maintain a clean atmosphere. As a result, the current green audit's goals are to identify, measure, characterise, and order the environmental sustainability framework in accordance with the laws, rules, and guidelines that apply. The primary goals of doing a Green Audit are:

- Mapping the college's geographic location
- To record the variety of plants and animals at the college
- To record the weather conditions in Kolkata, the college's location
- To document the condition of the surrounding water, air, weather, and noise levels.
- To document the meteorological parameters of Kolkata, the location of the college
- To record the waste disposal system.
- To calculate the college's energy needs.

METHODOLOGY:

Rani Birla Girls' College is conducting a green audit to make sure that campus policies and practices align with the nation's green policy. The process consists of data collection, campus physical inspection, documentation observation and review, and data analysis.

FINDINGS ON FLORAL DIVERSITY OF THE CAMPUS

RANI BIRLA GIRLS' COLLEGE, Kolkata was established in July 1961 as an undergraduate arts college affiliated to the University of Calcutta by the Hindusthan Charity Trust in the memory of Rani Jogeshwari Devi Birla to serve as a women's educational institution and to impart a comprehensive learning programme to its students within an enlightened, liberal and progressive milieu. The college is very conveniently located on Shakespeare Sarani and is easily accessible from both the A.J.C. Bose Road and Jawaharlal Nehru Road intersections of Shakespeare Sarani. It is adjacent to Bharatiya Bhasha Parishad and Macpherson Square.

The important findings of the present visit of this college campus show that though the area of the campus is very limited, however it supports significant diversity of flora. The campus is flourished with **42** taxa of plants, ranging from herbs to shrubs and trees (**Table 1**). Most of the plants are native species. Many of the plant species are economically important with medicinal values.

The team also observed that presently, only few name plates for the plants present in the gardens are provided on the temporary sheets. Therefore, the team recommends that name plates of plants, mentioning the scientific name, local name (if available) with family, and their medicinal uses, if available, may be tagged for spread awareness among the students and faculty members. Further, considering the importance of biodiversity, proper maintenance and cataloguing of biodiversity of the campus will be of significant use. Besides the plants available in the campus (as mentioned under table 1), BSI team also suggested for development of a small medicinal Garden in the available space and plantation of common medicinal plants as suggested (**Table 2**). Besides, It was also observed that the flora of the campus support significantly as habitats for many common birds and animals. Therefore, it should be maintained properly and sustainably in order to maintain a green and clean campus.

Table 1. List of the Plant taxa recorded in the college campus

Sr. No.	Family	Scientific Name	Bengali Name	Common Name
1.	Annonaceae	<i>Monoon longifolium</i> (Sonn.) B. Xue & R. M. K. Saunders		False Ashoka
2.	Lecythidaceae	<i>Couropita guianensis</i> Aubl.	নাগচম্পা / কামানগোলা	Cannon Ball tree
3.	Meliaceae	<i>Azadirachta indica</i> A.Juss.	নিম	Neeon Tree
4.	Acanthaceae	<i>Justicia adhatoda</i> L.	বাসক	Vasaka/ Malabar Nut
5.	Moraceae	<i>Ficus benghalensis</i> L.	বট	Banyan tree
6.	Arecaceae	<i>Livistona chinensis</i> (Jacq.) R.Br. ex Mart.	সুবাবুল	Chinese Fan Palm/ fountain palm
7.	Anacardiaceae	<i>Mangifera indica</i> L.	আম	Mango
8.	Euphorbiaceae	<i>Codiaeum variegatum</i> (L.) Rumph. ex A.Juss.		Croton
9.	Araceae	<i>Dieffenbachia seguine</i> (Jacq.) Schott		Dumbcane
10.	Myrtaceae	<i>Syzygium cumini</i> (L.) Skeels	জাম	Java Plum
11.	Apocynaceae	<i>Plumeria pudica</i> Jacq.	কাঠচম্পা	Bridal Bouquet
12.	Arecaceae	<i>Cocos nucifera</i> L.	নারকেল	Coconut
13.	Rubiaceae	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	কদম্ব	Kadamba
14.	Araceae	<i>Epipremnum aureum</i> (Linden & André) G.S.Bunting		Money Plant
15.	Arecaceae	<i>Caryota mitis</i> Lour.		Fishtail Palm
16.	Arecaceae	<i>Areca catechu</i> L.	সুপারি	Betel-nut Palm
17.	Asparagaceae	<i>Cordyline fruticosa</i> (L.) A.Chev.		Cordyline Plant
18.	Moraceae	<i>Artocarpus heterophyllus</i> Lam.	কাঁঠাল	Jackfruit
19.	Arecaceae	<i>Chrysalidocarpus lutescens</i> H.Wendl.		Palm
20.	Apocynaceae	<i>Alstonia scholaris</i> (L.) R.Br.	ছাতিম	Blackboard Tree
21.	Verbenaceae	<i>Duranta erecta</i> L.	কাটা মেহেন্দি	pigeon berry
22.	Rubiaceae	<i>Ixora pavetta</i> Andrews	স্বৈত রঙ্গন	
23.	Rubiaceae	<i>Ixora coccinea</i> L.		
24.	Malvaceae	<i>Hibiscus rosa-sinensis</i> L.	জবা	Chinese Hibiscus
25.	Euphorbiaceae	<i>Euphorbia tithymaloides</i> L.	রং চিতা	Redbird Flower

26.	Asteraceae	<i>Tagetes erecta</i> L.	ফরাসি গাঁদা	French marigold
27.	Euphorbiaceae	<i>Euphorbia hirta</i> L.	দুধিয়া/ বারোকানি	Dove Milk
28.	Euphorbiaceae	<i>Phyllanthus niruri</i> L.		
29.	Nyctaginaceae	<i>Bougainvillea spectabilis</i> Willd.	বাগান বিলাশ ফুল	Bougainvillea
30.	Acanthaceae	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	কালমেঘ	Green chiretta
31.	Poaceae	<i>Cynodon dactylon</i> (L.) Pers.	দূর্বা	Scutch grass
32.	Asteraceae	<i>Tridax procumbens</i> L.	ত্রিধারা	Coat Buttons
33.	Fabaceae	<i>Tamarindus indica</i> L.	তৈঁতুল	Tamarind
34.	Solanaceae	<i>Solanum nigrum</i> L.		Grasses
35.	Poaceae	<i>Digitaria ciliaris</i> (Retz.) Koeler		Southern Crabgrass
36.	Euphorbiaceae	<i>Euphorbia milii</i> Des Moul.	কাঁটা মুকুট	Crown-of- thorns
37.	Euphorbiaceae	<i>Acalypha indica</i> L.	মুক্তঝুরি	Indian Copperleaf
38.	Asteraceae	<i>Cyanthillium cinereum</i> (L.) H.Rob.		
39.	Fabaceae	<i>Grona triflora</i> (L.) H.Ohashi & K.Ohashi		
40.	Rubiaceae	<i>Gardenia jasminoides</i> J.Ellis		
41.	Verbenaceae	<i>Clerodendrum infortunatum</i> L.	ভাংট, ঘৈংটু	
42.	Cyperaceae	<i>Cyperus rotundus</i> L.		

Table 2. Suggested Medicinal Plants for plantation in the College Garden.

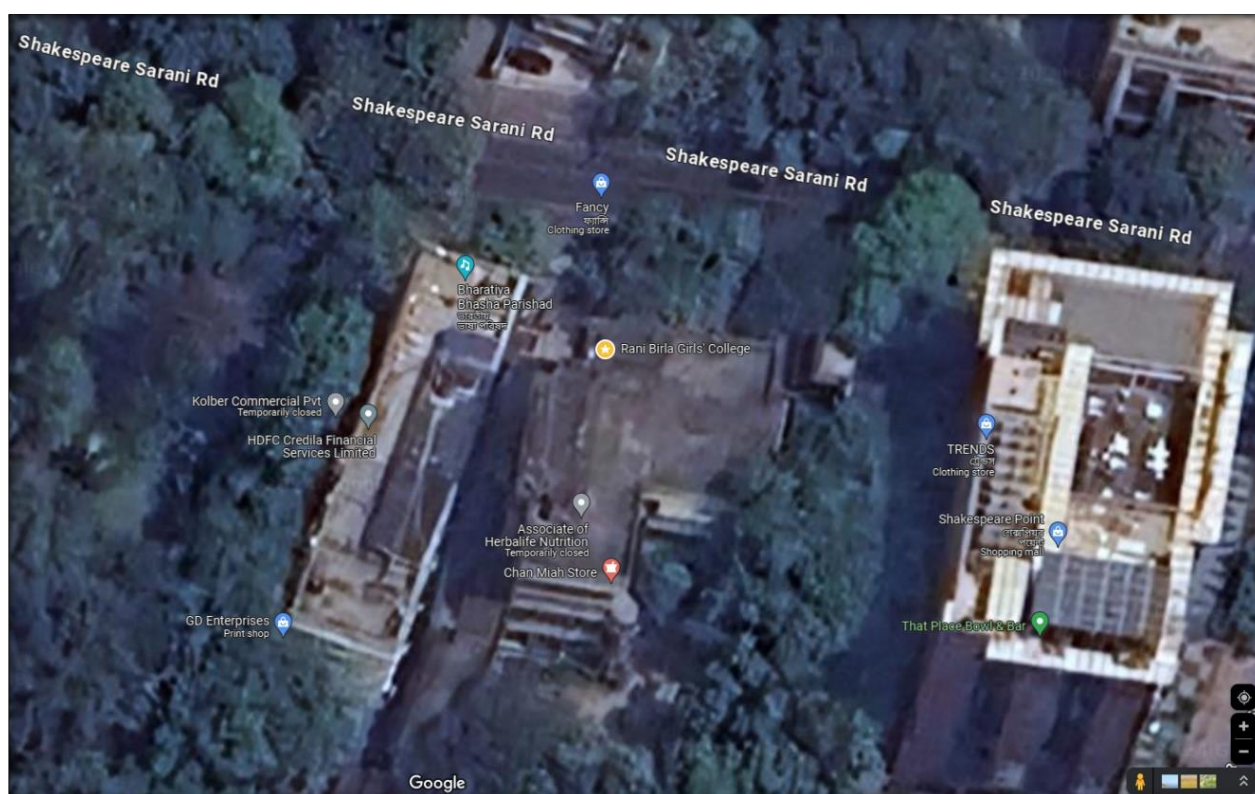
SL. No.	Name of the medicinal plants	Uses
1	<i>Rauwolfia serpentina</i> (L.) Benth. ex Kurz	Hypertension, high blood pressure.
2	<i>Justicia adhatoda</i> L.	Bronchial disease, cough,
3	<i>Holarrhena pubescens</i> Wall. ex G. Don	Dysentery, diarrhoea, fever, diabetes, malaria.
4	<i>Vitex negundo</i> L.	Skin disease, Eczema, ringworm, liver disorder spleen enlargement.
5	<i>Saraca asoca</i> (Roxb.) Willd.	Dysmenorrhoea, Depression, leucorrhoea

6	<i>Lawsonia inermis</i> L.	Skin disease, anti hemorrhagic, leprosy
7	<i>Nyctanthes arbor-tristis</i> L.	Sciatica arthritis, fever, dry cough ringworm,
8	<i>Catharanthus roseus</i> (L.) G.Don	Diabetes, malaria, leucomia
9	<i>Aloe vera</i> (L.) Burm.f.	Aantioxidants.
10	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson	Fever, jaundice, chronic diarrhea, cancer, dysentery, bone fracture, pain, asthuma, skin disease, poisonous insect, snake bite, eye disorders.
11	<i>Phyllanthus emblica</i> L.	Source of Vitamin C, Improves Immunity and nourishes eyes, hair and skin.
12	<i>Ocimum tenuiflorum</i> L.	Useful in cough, asthma and fever, anti-oxidant
13	<i>Centella asiatica</i> (L.) Urb.	Diarrhoea, dysentery, healing property
14	<i>Oxalis corniculata</i> L.	Use for treatment of influenza, fever, urinary tract infections, enteritis, diarrhoea, traumatic injuries and sprains.
15	<i>Eclipta prostrata</i> (L.) L.	Ayurvedic medicine, the leaf extract is considered a powerful liver tonic, rejuvenate, and especially good for the hair.

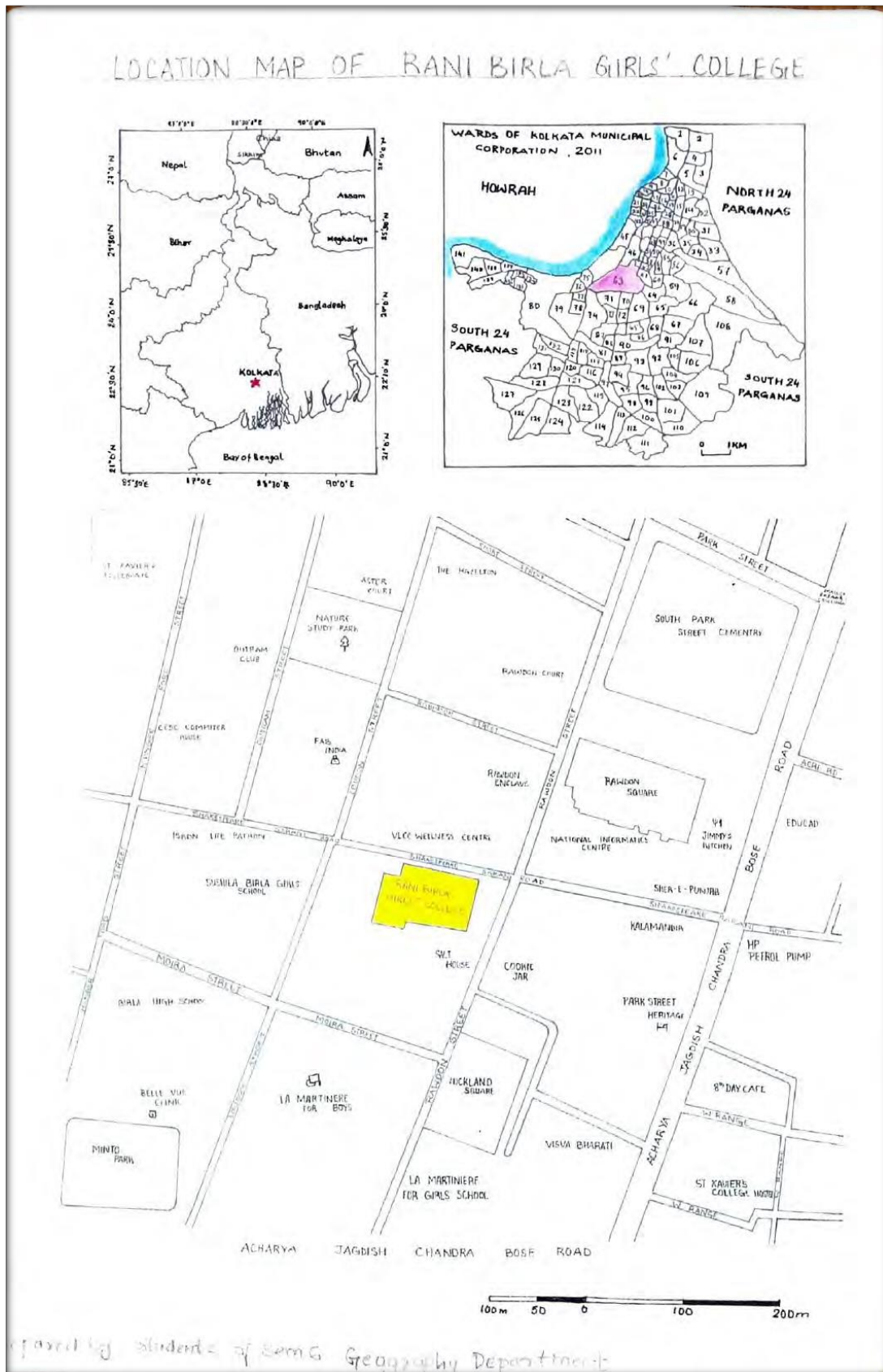
INFRASTRUCTURE OF THE COLLEGE

GEOGRAPHICAL LOCATION:

Rani Birla College comes under the University of Calcutta and was established in the year 1961, imparting higher education in the field of Arts. It is located in a rented building in the heart of the capital of West Bengal and at a prime location i.e. Shakespeare Sarani, Kolkata at 22° 54'N and 88° 35' E. The college is running in a rented property with an area of 1 Bigha 4 Katha and 2 Chatak (nearly 32,535 sq. ft). out of the total area, 11,330 sq. ft is built-up. The premise has a playground of 8020 sq. ft area. The College admits students from all social milieus and empowers them through intensive mentoring and counselling to face the challenges of life and become responsible and sensitized citizens of the country. RBGC provides a caring and nurturing environment where students come into their own, blossoming into confident young women ready to face the world.

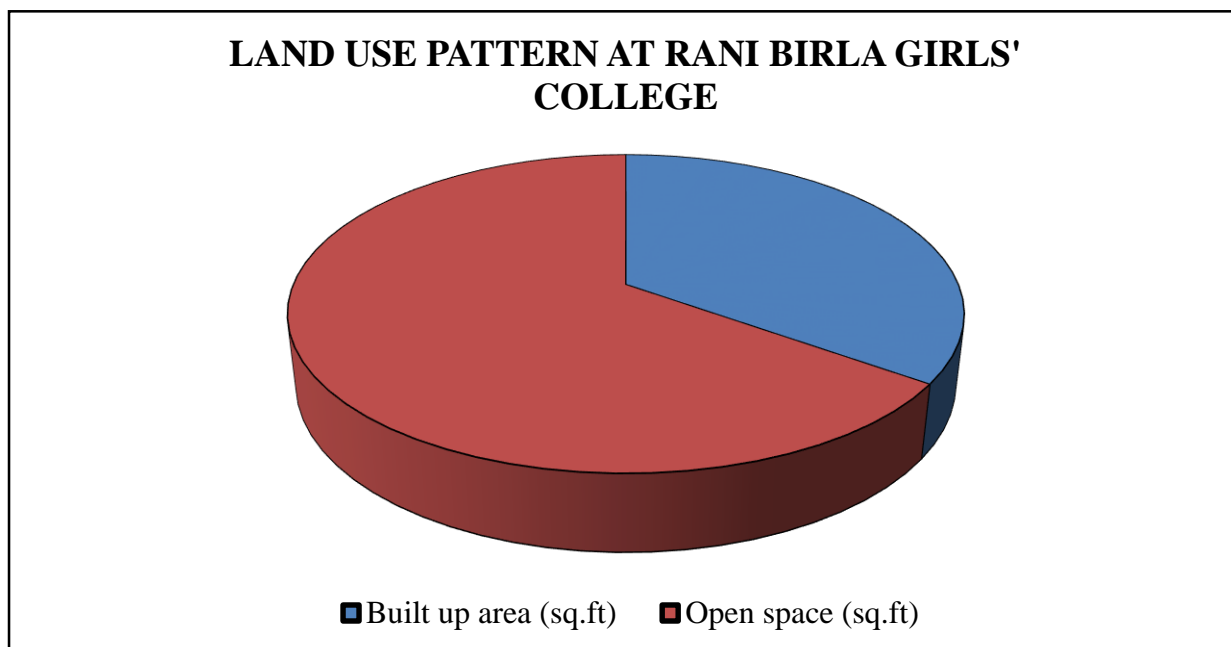


LOCATION OF RANI BIRLA GIRLS COLLEGE

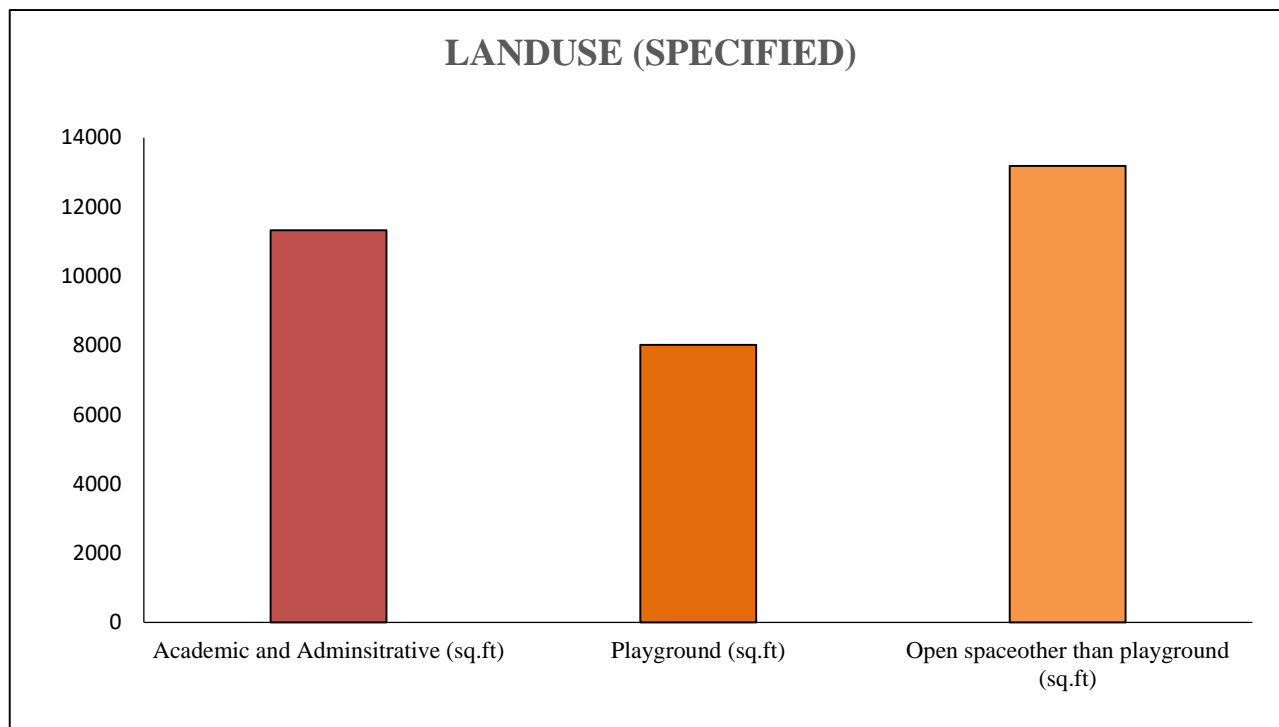


Building Name	Building Square Footage (m ²)	Age of Building (years)	Purpose of Building	Number of Floors	Daily Operational Hours	Days of Use per Week	Average number of occupants
Main Building (Total Campus)	11,330 sq. ft	Nearly 80 years	Academic	3	8	6	700
Anex-I Building		Nearly 80 years	Academic	2	8	6	120
Anex-II Building		Nearly 80 years	Academic	2	8	6	50

LANDUSE	AREA IN SQ. FT
BUILT UP AREA	11330 sq.ft
OPEN SPACE	21205 sq.ft
Total Area	32535 sq.ft



LANDUSE (SPECIFIED)	AREA IN SQ. FT
Academic and Administrative (sq.ft)	11330
Playground (sq.ft)	8020
Open space other than playground (sq.ft)	13185



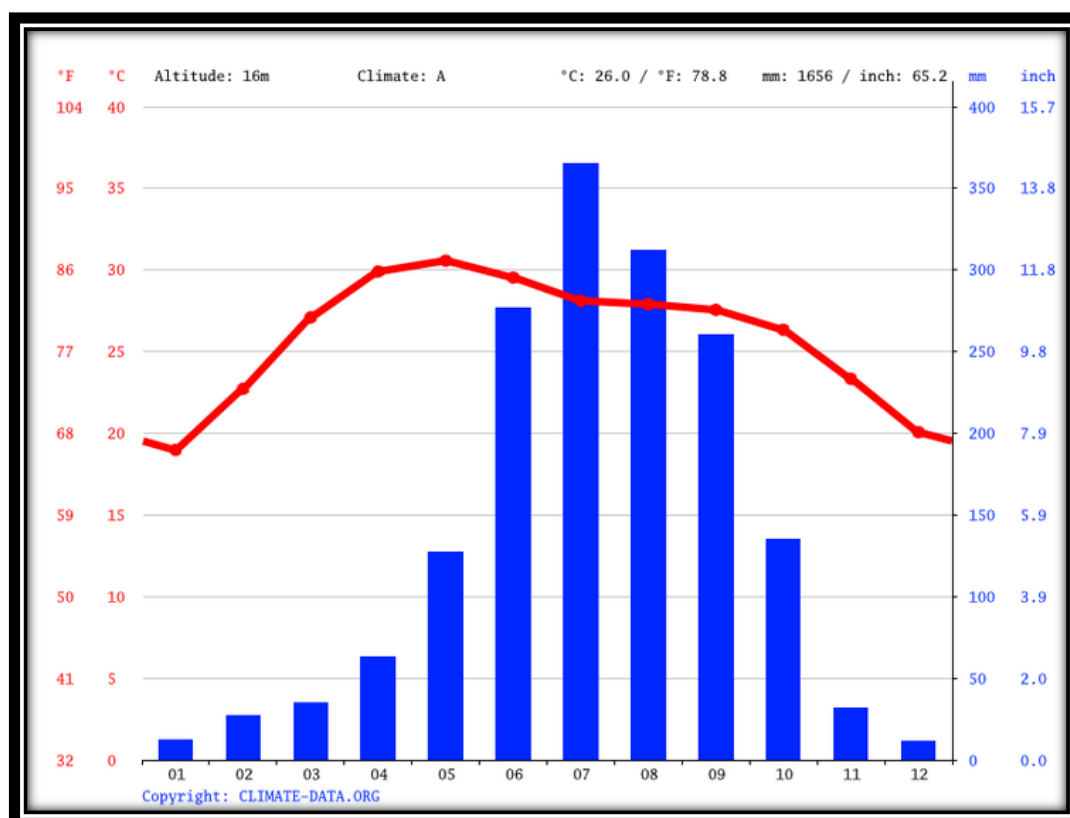
Weather Data of Kolkata and Rani Birla Girls' College:

The Capital of West Bengal, Kolkata, and Rani Birla Girls' College in Kolkata experiences a tropical wet-and-dry climate (Köppen climatic classification Aw). The yearly mean temperature is 26.8 °C (80 °F), but monthly average temperatures range from 15 °C to 30 °C (59 °F to 86 °F).[1] Summers are hot and humid, with temperatures in the low 30s. During dry spells, maximum temperatures frequently approach 40 °C (104 °F) in May and June.[1] Winter typically lasts around two and a half months, with seasonal lows ranging from 9 to 11 degrees Celsius (48.2 to 51.8 degrees Fahrenheit) between December and January. The highest recorded temperature was 43.9 °C (111 °F), while the lowest was 5 °C (41 °F).

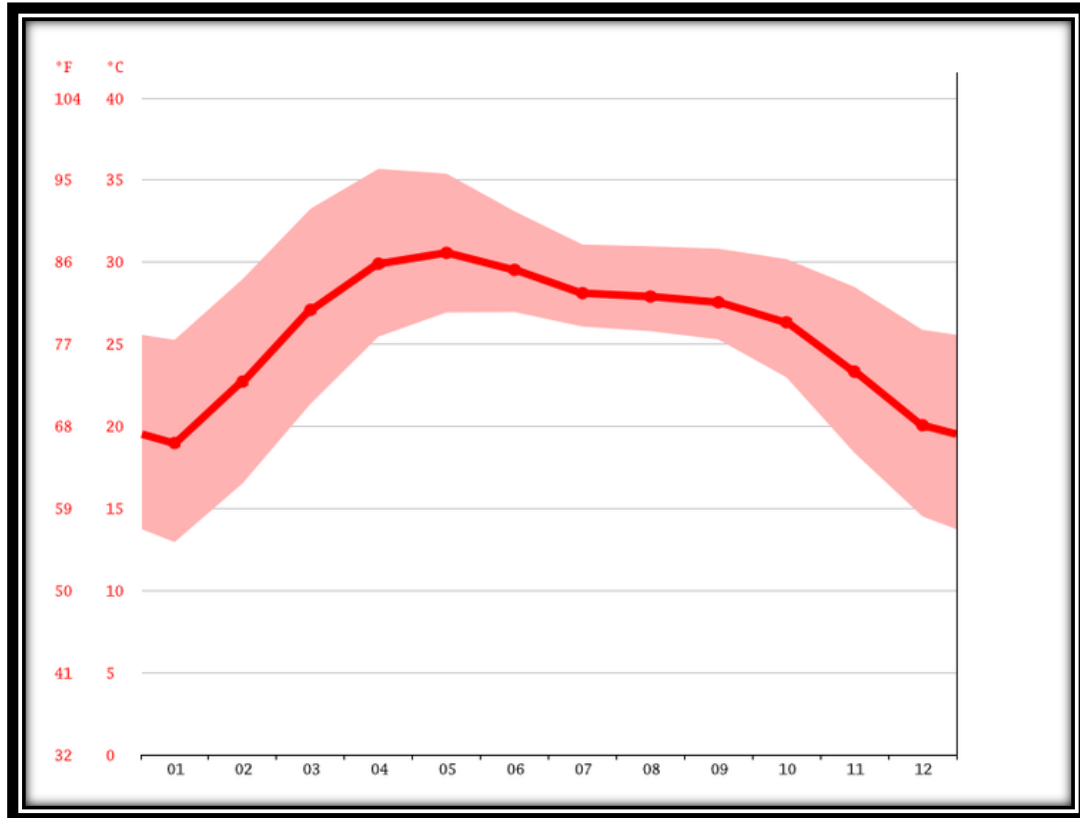
	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	19 °C (66.2) °F	22.7 °C (72.9) °F	27.1 °C (80.8) °F	29.9 °C (85.8) °F	30.6 °C (87) °F	29.5 °C (85.2) °F	28.1 °C (82.6) °F	27.9 °C (82.2) °F	27.6 °C (81.6) °F	26.3 °C (79.4) °F	23.3 °C (74) °F	20.1 °C (68.1) °F
Min. Temperature °C (°F)	12.9 °C (55.3) °F	16.5 °C (61.7) °F	21.4 °C (70.5) °F	25.5 °C (77.8) °F	26.9 °C (80.5) °F	27 °C (80.5) °F	26.1 °C (78.9) °F	25.8 °C (78.4) °F	25.3 °C (77.5) °F	23 °C (73.4) °F	18.4 °C (65.1) °F	14.5 °C (58.1) °F
Max. Temperature °C (°F)	25.3 °C (77.5) °F	29 °C (84.1) °F	33.3 °C (91.9) °F	35.7 °C (96.2) °F	35.4 °C (95.7) °F	33.1 °C (91.6) °F	31.1 °C (87.9) °F	31 °C (87.7) °F	30.8 °C (87.5) °F	30.2 °C (86.3) °F	28.5 °C (83.3) °F	25.9 °C (78.6) °F
Precipitation / Rainfall mm (in)	12 (0)	27 (1)	35 (1)	63 (2)	127 (5)	277 (10)	365 (14)	312 (12)	260 (10)	135 (5)	32 (1)	11 (0)
Humidity(%)	64%	61%	59%	67%	73%	81%	85%	86%	87%	82%	70%	65%
Rainy days (d)	1	2	3	6	9	16	21	21	18	10	2	1
avg. Sun hours (hours)	9.1	9.3	9.7	9.7	8.9	8.7	8.2	7.8	7.8	8.3	8.9	8.8

Data: 1991 - 2023 Min. Temperature °C (°F), Max. Temperature °C (°F), Precipitation / Rainfall mm (in), Humidity, Rainy days. Data: 1999 - 2023: avg. Sun hours. Source: <https://en.climate-data.org/asia/india/west-bengal/kolkata-2826>

RAINFALL-TEMPERATURE GRAPH OF KOLKATA



AVERAGE TEMPERATURE BY MONTH IN KOLKATA



Quality Assessment of soil at Rani Birla Girls' College:

Soil sample collection by the students for soil testing (27th March, 2024):



SOIL PROPERTIES	VALUE	REMARKS
pH	8.5	Strongly Alkaline
Nitrate Nitrogen	18 Lbs/acre	Medium
Ammoniacal Nitrogen	13 Lbs/acre	Low
Potassium	250 to 350 lbs/acre	High
Phosphate	Less than 20 lbs/acre	Very Low
Organic matter	Below 0.5%	Very Low
Salinity	0.1 PPT	Very Low

Source- Lab Report, Department of Geography, Rani Birla Girls' College

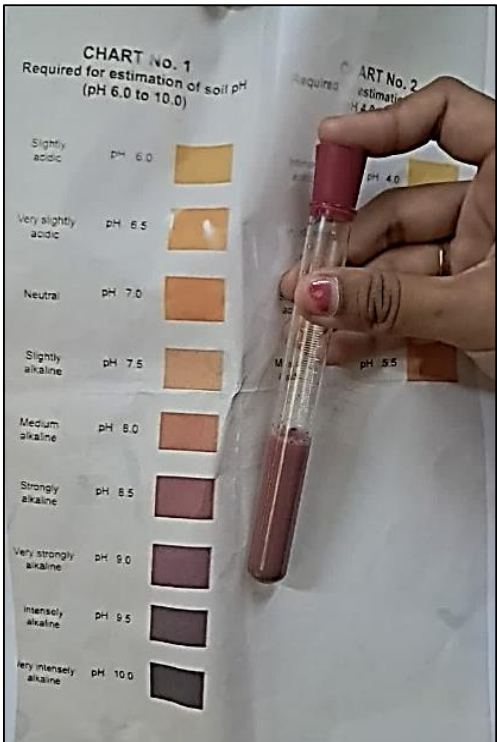


Figure 3: Scientific equipments available in the Geography Department



Library4: Library facility available in college

SUGGESTIONS AND RECOMMENDATIONS

During Green Audit, based on the observation and availability of the resources, BSI team, recommends the following suggestions and recommendations, to draw the kind attention of the college authority.

- 1. All plants available in the campus need to be labelled with a proper name plate, mentioning its botanical name, family, local name and economic or medicinal importance, if any, to increase awareness among the students and faculty members.**
- 2. A small Medicinal Plant Garden in the campus may be developed in small space, by introducing indigenous medicinal (Herbal) and economically important plants (A suggested list is provided in table 2).**
- 3. Outreach activities on eco-friendly initiatives involving green skill development, environmental Awareness, debates on objectives of mission LiFE etc. may be organised in the campus regularly for increase general awareness among the students towards biodiversity conservation.**
- 4. Waste management of the college may be strengthened by increasing the number of different types of bins. Non-Biodegradable and laboratory waste may be disposed by engaging registered and professional agency can be done.**
- 5. The bio-degradable wastes may be used for generating bio-compost / vermi-compost that can be reused for gardening for self-sustainability.**
- 6. The energy saving bulbs and electric appliances, if left out at any places, should be used to reduce the energy consumption.**
- 7. Periodic review and green auditing of the campus should be conducted for maintaining and improving the environmental health of the campus as well as students and faculty members.**
- 8. The Graffiti on education quotes and slogans by the eminent personalities, particularly the women Scientists, may be placed suitably to inspire the student.**
- 9. The college may start courses in Biological sciences (Botany, Zoology, Biotechnology etc.) by arranging necessary resources. This will be an added advantage to maintain the botanic garden in the campus.**

ACKNOWLEDGEMENT

The team is thankful to Dr. A.A. Mao, Director, Botanical Survey of India, Kolkata for granting permission and facilities for conducting green auditing of the College. The team also expresses gratitude to Dr. Srabanti Bhattacharya, Principal, Rani Birla Girls' College and Mrs. Sushmita Das, Co-ordinator of IQAC of Rani Birla Girls' College, Kolkata, West Bengal for extending support for green audit. The team is also thankful to the faculty members of Department of Geography of the College for their support. Special gratitude to Dr. Keya Dutta and Kamalika Paul, the convenors of Nature Club of the college.

PHOTOGRAPHS OF THE CAMPUS



Figure 5: Front and back side view of the College building



Figure 6: BSI team with Principal and faculties of the college.



Figure 7: Presentation on Green Audit and Mission LiFE to the students and faculties



Figure 8: Computes and digital resources available in college lab



Figure 9: Topographical maps available in Geography department



Figure 10: Dustbins available in the campus



Figure 11: Sanitary napkin vending machine available in the campus



Figure 12: Concrete block around the tree



Figure 13: Temporary name plates available for selected trees in the campus



Figure 3: Greenery inside the college campus



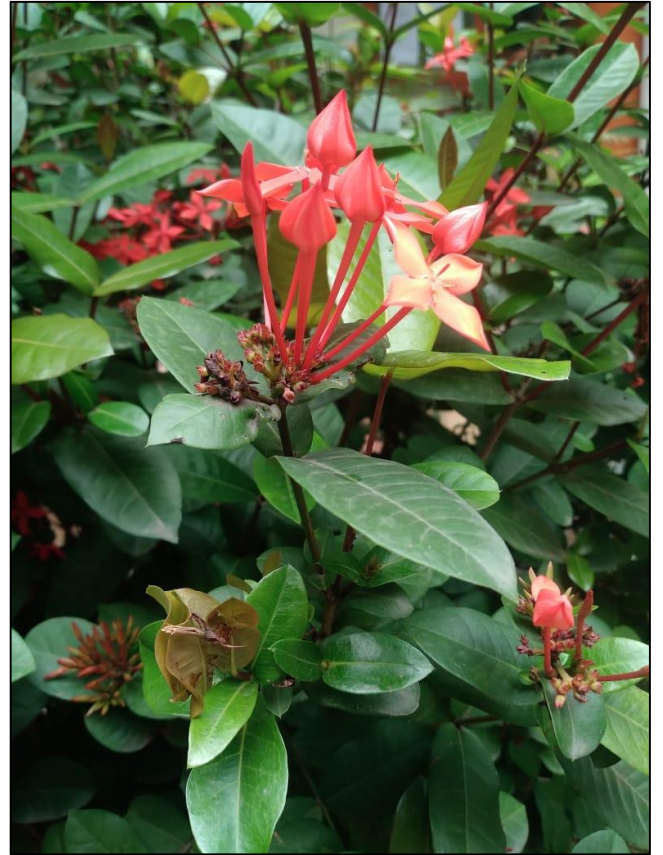
Figure 4: Plantation of **croton in the campus garden**



Figure 5: *Couroupita guianensis* Aubl. (Cannon Ball Tree) – A gigantic tree, with close up of inflorescence and flowers



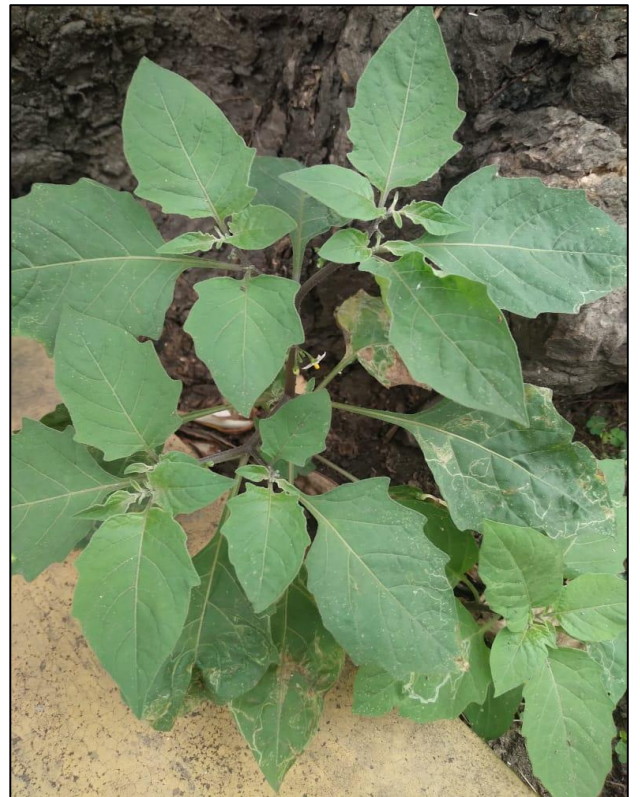
Hibiscus × rosa-sinensis L.



Ixora coccinea L.



Phyllanthus niruri L.



Solanum nigrum L.

Figure 6: Some common plants available in college garden



Andrographis paniculata (Burm.f.) Nees



Cyanthillium cinereum (L.) H. Rob.



Euphorbia hirta L.



Grona triflora (L.) H. Ohashi & K. Ohashi



Gardenia jasminoides J. Ellis



Ixora pavetta Andrews

Figure 7: Some common plants available in college garden



Figure 8: Documentation of plants of the campus by BSI team



Figure 20: Documentation and photography of the plants of the campus by BSI team



Figure 21: Interaction with IQAC faculty regarding maintenance of the garden in the college campus

Annex. 1 : Communication for Green Audit



PHONE : 2287-5509 / 2283-5797
RANI BIRLA GIRLS' COLLEGE
38, Shakespeare Sarani
Kolkata - 700 017
GOVT. AIDED NAAC ACCREDITED

Letter No. 312/Prin/2024

Dr. Tiwari

To
The Director
Botanical Survey of India
CGO Complex, 3rd MSO Building
DF Block
Sector-1 Saltlake City
Kolkata-700064

Dr. Tiwari
25/1/2024
Dr. Sushov for work.
29/1/24

Date: 19/01/24.

Subject: Applying for Green Audit

Respected Sir/Madam,

I am pleased to inform you that, Rani Birla Girls' College, a government-aided undergraduate college (affiliated to University of Calcutta), Located at 38, Shakespeare Sarani, Kolkata-700017, are keen to conduct a green audit of our premises for the upcoming National Assessment and Accreditation Council (NAAC) process.

Rani Birla Girls' College is committed to sustainability and environmental responsibility and we think that a comprehensive green audit would allow us to improve our campus greenery. We therefore request you to kindly assist us in the green audit process of our institution by conducting the same with your expertise.

We look forward towards your kind response; we are also open to any discussions regarding the possibilities of any other program or campaign you suggest in this regard.

Thanking you and looking forward to your kind acceptance.

Warmest Regards,

S. Bhattacharya

DR. Srabanti Bhattacharya

Principal

Contact Person

Dr. Keya Shiva

8777858264

keyadutta0205@rediffmail.com

TECHNICAL SECTION, OFFICE OF DIRECTOR, BSI,
Dy. No. T-424
Date: 25.01.2024

PRINCIPAL
RANI BIRLA GIRLS' COLLEGE
38, SHAKESPEARE SARANI
KOLKATA - 700017



भारत सरकार
GOVERNMENT OF INDIA

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE



सत्यमेव जयते

स्पीड पोस्ट / SPEED POST



भारतीय वनस्पति सर्वेक्षण / BOTANICAL SURVEY OF INDIA
सी.जी.ओ. कॉम्प्लेक्स / CGO COMPLEX
तृतीय एम. एस. ओ. भवन / 3RD MSO BUILDING
पाँचवाँ और छठा तल / 5TH & 6TH FLOOR
डी एफ ब्लॉक, सेक्टर 1 / DF BLOCK, SECTOR I
साल्टलेक, कोलकाता-६४ / SALT LAKE, KOLKATA – 700064
Tel.: (033) 2321 4050 [Tech. Section] ; E-mail: tech@bsi.gov.in

फाइल संख्या/File No. BSI-295/1/2024-Tech.

दिनांक /Date: 15th March, 2024

आदेश/ORDER

Approval of the Competent Authority, Botanical Survey of India is hereby conveyed for the tour of the following officials of BSI from their respective place of posting to Shakespeare Sarani, Kolkata for the purpose and date mentioned below:

Sl. No.	Name and Designation	Duration of tour approved	Purpose of visit
i.	Dr. Sudhir Kumar Yadav Botanist BSI-Hqtrs., Kolkata	16 th March, 2024	To conduct the Green Audit at Rani Birla Girls' College, 38, Shakespeare Sarani, Kolkata – 700017 on 16 th March, 2024.
ii.	Shri. Sanjay Kumar Botanist BSI-CNH, Howrah	16 th March, 2024	-DO-

The expenditure involved in this regard will be borne by the Rani Birla Girls' College, 38, Shakespeare Sarani, Kolkata – 700017.

(उमेशकुमार ल. तिवारी / Umeshkumar L. Tiwari)
वैज्ञानिक डी / Scientist D

For, प्रभारी, तकनीकी अनुभाग/ In-Charge, Tech. Section

Distributions:

1. Officials concerned.
2. H.o.O., BSI- Hqtrs./ BSI-CNH, for information.
3. Principal, Rani Birla Girls' College, 38, Shakespeare Sarani, Kolkata – 700017, for information and necessary action w.r.t. the letter No. 312/Prin/2024, dated 19.01.2024.

7635-7639)
प्रेषित / DESPATCHED
jay
15/03/24





View of a gigantic tree of *Couroupita guianensis* Aubl. (Cannon Ball Tree) in college campus