Centre for Environment and Life Care

GREEN AUDIT REPORT

KARIM CITY COLLEGE

Jamshedpur, Jharkhand (INDIA)

2023-2024

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Centre for Environment and Life Care

Executive Summary

Karim City College's initiative to conduct a Green Audit of its campus across three locations is a commendable step toward sustainable development. The strategies involved included the preparation of questionnaires and subsequent action plans to implement the project.

The Green Audit aligns with Criteria 7 of the National Assessment and Accreditation Council (NAAC), an autonomous organization in India that grades institutions as Grade A, Grade B, or Grade C based on their accreditation scores.

The Green Audit aimed to analyze the environmental practices within the campus, which affect the university's eco-friendly ambiance. The primary goal of the Green Audit is to secure best practices for environmental sustainability, thereby reducing potential health hazards and threats to students. The audit helps ensure compliance with various environmental management norms and standards and identifies protocols to develop a sustainable ecosystem on campus.

Questionnaires for the Green Audit were prepared based on guidelines, rules, acts, and formats set by the Government of India, the Ministry of Environment and Forest, New Delhi, and the Central Pollution Control Board, New Delhi. These questionnaires covered aspects such as solid waste, energy, water, hazardous waste, and e-waste. For the audit, suitable data analysis required the study area to be grouped into various Blocks and Departments. The audit examined areas including solid waste, electricity and energy, water and wastewater, illumination, noise levels, and green inventory. It also highlighted the green initiatives undertaken by the university to conserve environmental resources.

CERTIFICATE

PRESENTED TO

KARIM CITY COLLEGE

ASSESSED BY CENTRE FOR ENVIRONMENT AND LIFECARE FOR THE COMPREHENSIVE STUDY OF ENVIRONMENTAL IMPACTS ON INSTITUTIONAL WORKING TO FULFIL THE REQUIREMENT OF

GREEN AUDIT

THE GREEN INITIATIVE CARRIED OUT BY THE INSTITUTION HAVE BEEN VERIFIED ON THE REPORT SUBMITTED AND WAS FOUND TO BE SATISFACTORY,

THE EFFORTS TAKEN BY THE MANAGEMENT AND THE FACULTY TOWARDS ENVIRONMENT AND SUSTAINABILITY ARE APPRECIATED AND NOTEWORTHY

SIGNATURE

02/06/2024 - 16/06/2024
DATE OF AUDIT

EGAC Accredited CAB # 011805

1.0 Introduction

1.1 Need for Green Audit

A Green Audit is a systematic process involving the identification, quantification, recording, reporting, and analysis of components of environmental diversity. It aims to evaluate environmental practices both within and outside the concerned sites, impacting the eco-friendly ambiance. The steps involved in a Green Audit include water audit, waste disposal audit, energy audit, and environmental quality audit, which covers illumination and noise levels on campus. By analyzing the audit reports, universities can recognize cost-effective waste management methods, promote an enhanced learning ecosystem, and strive for top accreditation grades. Additionally, it bolsters the university's credibility and branding.

1.2 Objectives of the Audit

The main objective of the Green Audit is to assess current sustainability practices concerning natural resource use, energy utilization, waste generation, and management in an environmentally friendly manner. The audit focuses on establishing a baseline of existing environmental conditions, emphasizing the natural and physical environment. It aims to raise awareness among students and staff about environmental issues and sustainability, document baseline data of good practices, and provide strategies and action plans for improving future environmental quality.

1.3 Green Audit Process

1. Understand the scope of the audit.
2. Analyze the strengths and weaknesses of the internal environment.
3. Conduct the audit.
4. Evaluate the observations of the audit program.
5. Prepare a report documenting the observations.

1.4 Benefits of Green Audit

- Cost Savings: Identifies cost-saving methods through waste minimization and management strategies.
- Problem Identification: Highlights existing and potential environmental issues.
- Enhanced Environmental Performance: Enables organizations to improve their environmental performance.
- Increased Awareness: Raises awareness of environmental guidelines and responsibilities.

1.5 Methodology of Green Audit

- Formation of the core team for the Green Audit and conducting a kick-off meeting and discussions.
- Primary data collection of energy, water, and solar plant details, as well as monitoring environmental parameters such as noise levels and illumination.
- Analysis and representation of the collected data.

1.6 Audit Participants

On behalf of KCC:

Sl No	Name	Designation/Departments
1	Dr. Aley Ali	HOD Geography, Coordinator NSS
2	Dr. Fakhruddin	Coordinator NCC
3	Dr. S.M. Yahiya Ibrahim	HOD English, Coordinator IQAC
4	Dr. Neha Tiwari	Prof in charge, DoMCVP & Convenor IEIC
5	Dr. Aftab Alam Khan	HOD Botany
6	Dr. Shahsiprabha Pandey	HOD Zoology

On behalf of Center for Environment and Life Care:

Sl No	Name	Position	Qualifications/Experience
1	Ajit Kumar Singh	Lead Auditor	M.Sc., PGDEPCT, PGDEMS, Lead Auditor ISO 14001: 2015, 20 years' experience in EMS & Compliance.
3	Shubhro Praksh das	Co-Auditor	Bachelor in political science, MSW
3	Dipak Soni	Co-Auditor	B.Sc. (IT) Project Manager. Working in social and environment sector last 5 years.

1.7 Onsite Visit

The Green Audit was conducted with the help of co-associates, involving various student groups, teaching, and non-teaching staff. The audit began with a kick-off meeting with the core team, followed by teams walking through all the different facilities at the college campuses in Sakchi, Mango, and Sundernagar. They determined the various utility patterns, waste management practices, and environmental parameters. Staff and students were interviewed to gather details

on usage, frequency, and general characteristics of environmental parameters. Data collection covered sectors such as energy, waste, green areas, and water use. College records and documents were verified multiple times to ensure the accuracy of data obtained through surveys and discussions.

1.8 Focus Group Discussion

Pre-audit discussions focused on the scope and objectives of the audit, considering the green initiatives already taken and the current scenario of the college campus. This meeting was a crucial step for the Green Audit as it was the first opportunity to understand concerns and gather information for the audit team to review before the onsite visit. The audit protocol and plan were distributed and discussed during this meeting. The necessary documents were collected from the college prior to the start of the audit processes. During this meeting, the audit team was selected with the help of staff and college management. The pre-audit meeting ensured successful planning and coordination of the audit processes.

1.9 Management Commitment

The management of the college has demonstrated a strong commitment to green auditing during the pre-audit meeting. They are prepared to encourage and support all green activities. Following the green audit, the management plans to promote various environmentally friendly initiatives, such as awareness programs on environmental issues, campus farming, and planting more trees on the campus. They are also willing to formulate policies based on the green audit report to ensure ongoing environmental sustainability.

2.0 About Karim City College (KCC)

Established in 1961 by our Founder Father, the late Syed Tafazzul Karim, with the goal of providing education to the weaker sections of Jamshedpur, particularly Muslims, Karim City College has grown into a premier educational institution in eastern India.

After the sad demise of our founder, his son, the late S.M. Shafiq, took up the mantle and led the institution with a proactive and dedicated approach. Following his death in 1992, his role was successfully and graciously filled by our current trustee, Mr. Syed Ashfaque Karim. His modern and progressive vision is propelling the college to greater heights.

Located in the heart of Jamshedpur, the college offers a student-friendly infrastructure, education-centric activities, and a knowledge-oriented ambiance. Approximately 6,700 students are currently enrolled in undergraduate and postgraduate programs across five faculties and 22 departments. Managed by Karim's Trust, Jamshedpur, and permanently affiliated with Kolhan University, Chaibasa, Karim City College is renowned for its discipline, quality services, and dedication.

Under the empirical approach of our present trustee, the college has advanced significantly in terms of infrastructure, exemplified by the development of our new campus in Mango. Academic excellence is a continuous pursuit for us, and we are unwavering in our quest for intellectual and infrastructural enhancement. The college held CPE status under the 11th plan of the UGC and was re-accredited by NAAC in 2012.

2.1 Focus

We as an Institution focus on our students who provide us a reason for our existence. All our efforts are directed towards inculcating a constant yearning for learning.

2.2 Vision & Mission

2.2.1 Vision

Karim City College is a Muslim Minority Institution run and managed by Karim Trust, Jamshedpur, with permanent affiliation to Kolhan University, Chaibasa. Founded by Late Syed Tafazzul Karim, with the intention of promoting education among the weaker sections, particularly the Muslims, the college was established in 1961 with pre-university courses. Degree courses were launched in the year 1963. The institution achieved milestones with affiliation being acquired in 1965 for its degree courses of Arts and Commerce. It's growth was accelerated by the establishment of its Faculty of Science in the year 1978. In the last fifteen years, after its first cycle of accreditation, the institution has witnessed a steady course of progress. In 2004 the
college went for its first assessment by NAAC and was awarded a grade of B+. In the year 2010, the college was accorded CPE status by the UGC. The college went for its second cycle of accreditation in the year 2012 and was awarded Grade B with Grade Point 2.88. In the year 2013, the institution inaugurated a new campus

at Mango to which its Faculty of Education was shifted. The college has zealously and consistently promoted extra-curricular activities. The college offers consistent encouragement to active social engagement and welfare activities. Discipline constitutes an important institutional concern. The institution focuses on character building through teaching and co-curricular activities. Today, the institution is proud to have its alumni disseminated across all parts of the country, rendering their services to society in various professional capacities.

Mission

Karim City College is the dream fulfilment of our visionary founder Late Syed Tafazzul Karim, who established the institution with Pre-University Courses in 1961 with a mission to impart quality education and to provide better opportunities of higher education to the weaker sections of the society particularly to the Muslim minority. Hence, all our efforts are targeted towards the attainment of this basic goal. The modern world and its challenges demand a constant renewal, a fresh approach and a process of change and adaption in the arena of higher education. The college is open to changes, innovations and improvisations. We are determined to acquire and provide the best in the field of higher education service towards self-fulfilment of our stakeholders in our constant goal. We are helping the students with the intention to enable them to help themselves. We are striving for the personal growth and leadership skills of our students empowering them to become responsible and cosmopolitan citizens. Building relationships, developing integrity and accountability, creating a sense of respect, service and fellow feeling and inculcating the rich cultural ethos of India? all are our constant efforts towards the building of the nation and a safe society. We are constantly trying to create a modern, peaceful, progress oriented and knowledge-based society with an emphasis upon research, innovation, production and not a sheer merits behaviour. We are constantly trying to create a great sense of understanding among our students with regard to India's plurality of religion and composite culture.

2.2 Geographical Location

The college spans 7.66 acres of land across three campuses in Jamshedpur city: the Sakchi campus (0.88 acres of leased land), the Mango campus (1.19 acres), and the Sundernagar campus (5.59 acres).

2.2.1 Buildings/Blocks

- **Sakchi Campus:** The main building houses administration offices, classrooms, and various departments. Additionally, there is an auditorium where seminars and programs are conducted.
- **Mango Campus:** This campus features classrooms, a library, a reading room, a common room, a practical activities room, and an auditorium.
- **Sundernagar Campus:** This campus is particularly notable for its developed green garden and green patches.
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2.2.2 Facilities Available in the College

The college library boasts a rich collection of textbooks and reference books to support the educational needs of students and faculty members. Each year, a substantial number of new books are added to the collection. Efforts are continuously made to update and improve the library, making it more user-friendly. The library includes a Faculty Studies section for teachers and a separate reading room for students. It also offers a central Xerox facility, allowing users to photocopy relevant books and reference materials at subsidized rates.

Additionally, with assistance from the UGC in New Delhi, the college library has initiated a Book Bank Scheme for needy and meritorious students.
The Ministry of Human Resource Development (MHRD), the Government of India, UGC, NAAC, and other policy-making agencies have always emphasized making the curriculum career-oriented and enhancing students' employability. Experts in education believe that employability, rather than employment, is a major issue for students. To address this, the college plans to create an Employability Enhancement Unit, which will oversee the Career Planning & Guidance Cell and the Placement Cell, ensuring they function effectively.

The college also provides two separate common rooms for boys and girls, equipped with facilities such as table tennis, carrom boards, chess, ludo, Chinese checkers, magazines, and newspapers. The common room organizes indoor games like carrom, chess, and table tennis for the students every year.

NAME OF COURSE	DURATION	EXAMINING BODY
B.A. Honours Programme (Bangla, Economics, English, Geography, Hindi, History, Philosophy, Pol. Science, Psychology, Urdu)	3 years	Kolhan University, Chaibasa
B.Sc. Honours Programme (Botany, Chemistry, Maths, Physics, Zoology)	3years	Kolhan University, Chaibasa
B.Com. Honours Programme (Financial Accounts)	3 years	Kolhan University, Chaibasa
B.A. Programme (Pass Course)	3 years	Kolhan University, Chaibasa
B.Sc. Programme (Pass Course)	3years	Kolhan University, Chaibasa
B.Com. Programme (Pass Course)	3 years	Kolhan University, Chaibasa
Bachelor in Mass Communication - Video Production	3 years	Kolhan University, Chaibasa
Bachelor of Computer Application (BCA)	3 years	Kolhan University, Chaibasa
B.Sc. Hons. (Information Technology) (BSc. IT)	3 years	Kolhan University, Chaibasa
Bachelor of Education (B.Ed.)	2 years	Kolhan University, Chaibasa
Diploma in Elementary Education (D.El.Ed.)	2 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Certificate (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Diploma (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Advance Diploma (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
M.A. in Urdu	2 Years	Kolhan University, Chaibasa
M.A. in Psychology	2 Years	Kolhan University, Chaibasa
M.A. in Mass Communication	2 Years	Kolhan University, Chaibasa
M.Com.	2 Years	Kolhan University, Chaibasa
M.Sc. in Mathematics	2 Years	Kolhan University, Chaibasa
Certificate Course in Foreign Languages Arabic / French / German	80 Hrs/3months	Karim City College
Certificate Course in Tribal Languages Ho / Santhali	80 Hrs/3months	Karim City College
Certificate Course in Professional's English	100 Hrs/4 months	Karim City College
Certificate Course in Modern Indian Languages Urdu / Bangla	40 Hrs	Karim City College

KARIM CITY COLLEGE, SAKCHI CAMPUS

KARIM CITY COLLEGE, MANGO CAMPUS

3.0 Green Audit

3.1 Questionnaires

Sl No	Audit Questions	Answers/Remarks
1.1	**General information**	
1	Does any Green Audit conduct earlier?	Yes
2	What is the total strength (people count) of the Institute?	Approx. 6000
3	What is the total number of working days of your campus in a year?	200
4	Where is the campus located?	Sakchi, Mango and Sundernagar, Jamshedpur
5	Municipal waste, Sewer line, waste water managed by?	Jamshedpur Notified area committee, JUSCO, Mango Municipal Corporation and Jamshedpur Zila Parishad area.

Sl No	Audit Questions	Answers/Remarks
1.2	**WASTE MINIMIZATION AND RECYCLING**	
1	Does your institute generate any waste? If so, what are they?	Solid waste.
2	What is the approximate amount of waste generated per day? (in KG approx.)	113 kg
3	How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)	• Single use plastic is banned on the campus. • Composting is done for horticulture waste management. • Solid waste (Both dry and wet) is managed by segregation in recycle. • Paper waste is sent to scrap vendor periodically. • KARIM CITY COLLEGE • signed MOU with e-waste recycler. • signed MOU with Koru Foundation for Recyclables
4	Do you use recycled paper in institute?	Yes, KCC collaborates with third party recycle vendor.
5	How would you spread the message of recycling to others in the community?	• Seminars and webinars for students and faculty. • Nukkar-Natak by Students to increasing awareness. • Various campaigns for awareness are organised by NSS team.

Sl No	Audit Questions	Answers/Remarks
1.3	**GREENING THE CAMPUS**	
1	Is there a garden in your institute?	Yes
2	Total number of Plants in Campus?	Full Grown Trees, Small Trees, Hedge Plants.
3	How many Tree Plantation Drives organized by campus per annum?	Yes. No. of plantation drives in last years.
4	Is there any Plant Distribution Program for Students and Community?	Yes

Sl No	Audit Questions	Answers/Remarks
1.4	**WATER AND WASTEWATER MANAGEMENT**	
1	Sources of water	JUSCO, Municipal water supply and Ground water.
2	Water usage details.	Drinking, Gardening, Kitchen & Toilets.
3	How does your institute store water? Are there any water saving techniques followed in your institute?	Sump tank and Overhead Water tanks.

3.2 Data analysis and final report preparation

Proper analysis and presentation of data produced from work are vital elements. In the case of a green audit, the filled questionnaires from each group's survey were tabulated according to their modules in Excel spreadsheets. This tabulated data was then used for further analysis. To enhance understanding and avoid complications, averages and percentages were calculated. Graphical representations of these results were created to provide a quick overview of the status. The overall outcomes were interpreted by incorporating all primary and secondary data, references, and interrelations. This interpretation was used to prepare the final report.

The study covered the following areas to summarize the current status of environmental management on the campus:

As part of the green audit, the Green Audit Assessment Team conducted environmental monitoring of the campus, including illumination and noise levels in the classrooms. It was observed that the illumination and ventilation are adequate, considering natural light and air velocity. Additionally, noise levels on the campus are well below the permissible limits.

3.2.1 Air Quality:

The air quality is monitored by the local authorities of the township. The campus is located in the heart of Jamshedpur. The air quality index (AQI) forecast for Jamshedpur is as follows:

Pollution level	Wind
Moderate 90 AQI	13.5 km/h

3.2.2 Illumination level

To improve the educational environment, classrooms need good lighting. Good lighting makes students feel safe and enhances learning. Additionally, it strengthens the school's brand value. Many studies have shown a close relationship between lighting and student performance.

A light level of **250 lux is sufficient in classrooms** where students spend most of their time and focus on learning. To draw attention to the area where the teacher is located and to enhance students' concentration, a light level of 750 lux can be used in that area. An illumination study was conducted in different classrooms, with values ranging from **350 to 600 lux.**

ILLUMINATION STUDY CONDUCTED IN COLLEGE

3.2.3 Noise Level

The human ear is constantly bombarded by man-made sounds from all directions, and there are few places in populated areas where relative quiet prevails. Sound has two basic properties: loudness and frequency.

Loudness is the strength of the sensation of sound perceived by an individual. It is measured in decibels (dB). For example, a whisper is about 20 dB, a library is around 30 dB, normal conversation ranges from 35-60 dB, heavy street traffic is about 60-70 dB, boiler factories are around 120 dB, jet planes during takeoff reach about 150 dB, and a rocket engine is about 180 dB. The loudest sound a person can endure without much discomfort is around 80 dB. Sounds beyond 80 dB can be considered pollutants as they harm the hearing system. The World Health Organization (WHO) has set 45 dB as the safe noise level for a city, while international standards consider up to 65 dB tolerable. Loudness is also expressed in sones, with one sone equaling the loudness of a 40 dB sound pressure at 1000 Hz.

Frequency is defined as the number of vibrations per second and is denoted in **Hertz (Hz).**

A Lutron noise level meter was used to measure the noise levels at different locations on the university campus.

Sl No	Locations	Sound level (dB)
1	At court yard of college at Sakchi campus	**64dB**
2	At Main Gate at Sakchi Campus	**66 dB**
3	Teachers common room at Mango campus	**64 dB**
4	In office entrance area at Mango campus area	**68 dB**

NOISE LEVEL MONITORING AT SAKCHI AND MANGO CAMPUSES

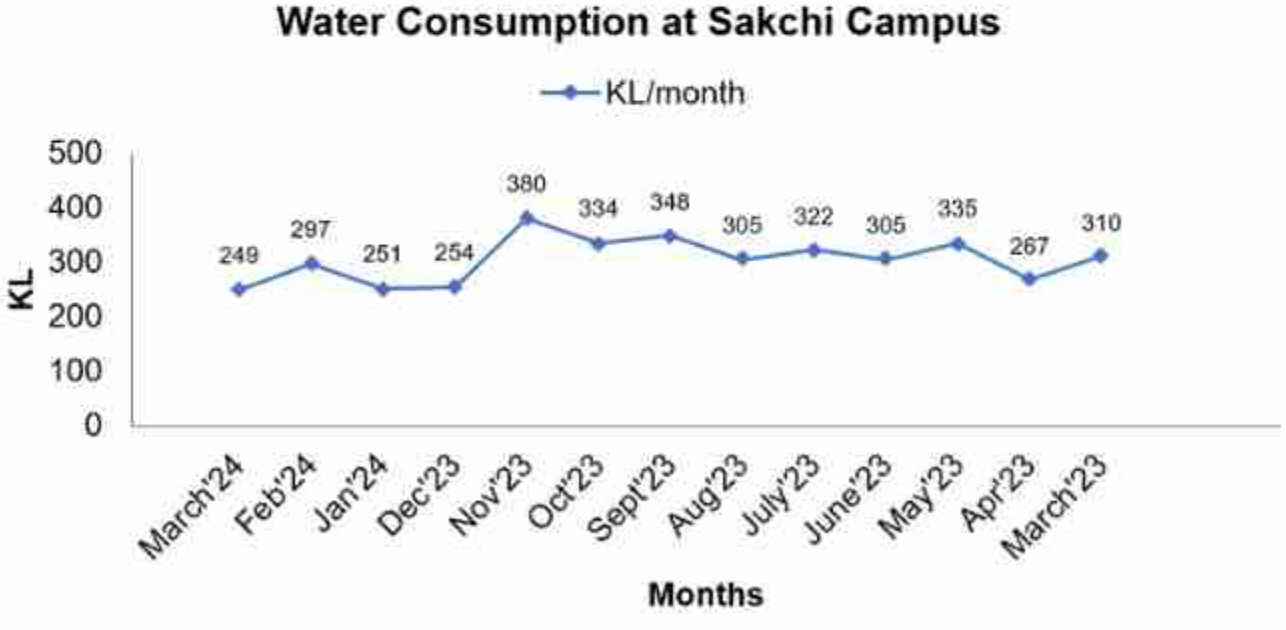
3.2.4 Water management

Water is one of the most crucial elements in our environment. At the university, water is primarily used for drinking, cleaning, gardening, food preparation, recreational purposes, laboratories, and bathrooms.

Water quality testing is vital because it identifies contaminants and prevents waterborne diseases. Drinking or using contaminated water can lead to severe illness or even death. Therefore, it is essential for KARIM CITY COLLEGE to ensure that drinking water is safe, clean, and free from bacteria and disease. Water quality parameters are determined by the intended use, with a focus on water treated for human consumption or environmental purposes.

The water supply comes from **JUSCO and Mango Municipal Corporation,** Jamshedpur. The supplied water is stored in overhead tanks and distributed for various uses. The buildings are connected, and storage tanks are installed on top of the buildings. **Approximately six tanks, each with a capacity of 2000 liters, are installed.**

The average water consumption per month is approximately 165 KL at the Sakchi campus and around 200 KL at the Mango campus.



WATER STORAGE AT MANGO CAMPUS : SUMP TANK, OVERHEAD TANKS, AND DRINKING WATER FACILITIES

FIRE HYDRANT WITH JOCKY PUMPS AT MANGO CAMPUS

3.2.5 Drinking water

The water used for drinking purposes is clean and well-maintained. A total of six RO units are installed on the campus, ensuring safe drinking water is available on all floors of the university.

Water Quality Assessment
Water samples from KARIM CITY COLLEGE were collected and analyzed for quality parameters. The major parameters analyzed include color, pH, total dissolved solids, and total suspended solids.

Microbial Analysis Worldwide
water-borne infections are a major contributor to illness and fatalities. Routine microbiological testing of drinking water sources, recreational waters, and environmental waters is essential for protecting public health.

WATER SOURCES AND RO WITH WATER COOLERS AT SAKCHI CAMPUS

3.2.6 Rain Water harvesting system

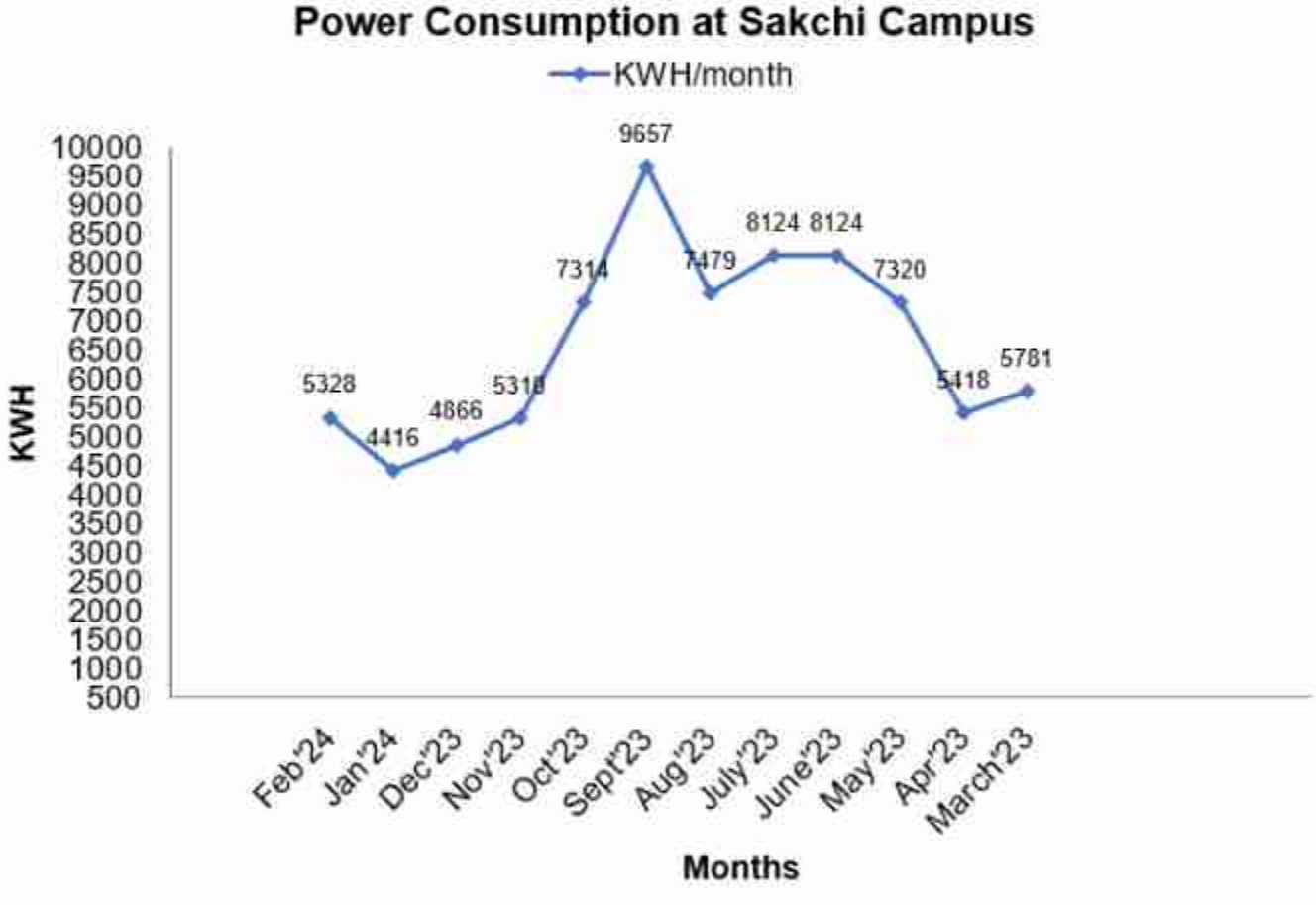
The campus features a rainwater harvesting system equipped with recharge pits located throughout the premises. These units effectively recharge the groundwater level by utilizing soaking pits spread across the campus. Rainwater collected from rooftops is directed into these recharge wells.

RAINWATER HARVESTING SYSTEM WITH DOWNPIPES AND WATER COLLECTION CIRCUITS AT MANGO CAMPUS

3.2.7 Energy Conservation

This indicator covers energy consumption at KARIM CITY COLLEGE, including energy sources, monitoring, lighting, appliances, and natural resources. Energy use is a crucial aspect of campus sustainability and requires no further justification for its inclusion in the assessment.

The monthly average energy consumption at KARIM CITY COLLEGE is 6594 kWh/month.



Power generation by Generator at Sakchi Campus:
ONE 60 KVA Mahindra

Power generation by Generator at Mango Campus:
ONE 125 KVA Mahindra

DG SET AT SAKCHI CAMPUS

LED LIGHTING IN LECTURE ROOMS AT SAKCHI CAMPUS

DG SET AT MANGO CAMPUS

POWER SUPPLY SYSTEM AT MANGO CAMPUS

Electrical equipments at the college

Equipments	Total Numbers
LED TUBE	230
LED BULB	50
Conventional Tube	600
LED PANEL	100
LED HALOGEN	28
Digital Notice Board	2
Glow Display Board	13
TV/ Sound System	11
Ceiling Fan	350
Wall Fan	35
Stand Fan	0
Exhaust Fan	24
Split Ac	33
Window Ac	1
Cooler	3
Water Dispenser	6
Water Filter	1
Bio Matric	2
Induction Cooker	4
Elect Katel	2
Xerox M/c	4
Motor Pump	3
D.G Set	1
Lab Equipment	65
Computer /UPS	195
Printer/Scanner	41
Networking Switch	0
Refrigrator	5
Microwave	1
CCTV Monitor	4

Power Consumption at Mango campus

Sl No	Month	KWh	Rs. Paid
1	Mar-23	-	7,937
2	Apr-23	-	7,888
3	May-23	-	7,800
4	Sep-23	3838	1,73,311
5	Nov-23	2994	1,62,177
6	Dec-23	2071	9,615
7	Jan-24	3243	33,471
8	Feb-24	3089	32,900
9	Mar-24	4521	49,936
10	Apr-24	5194	54,193
11	May-24	5375	54,888
	Total	**30,325**	**5,94,116**

Electrical Equpments at Mango campus

Sl No	Equipment	Watt	Quantity
1	Fan	75	185
2	LED Tube lights	18	130
3	General Tube lights	36	166
4	Air Conditioners	1.05 T	9
5	Computer	140-150	63
6	Water cooler	1200	1

3.2.8 Solar Energy

The college has undertaken a significant step towards sustainability by installing solar lights at the entrance. This initiative not only promotes the use of renewable energy but also enhances the visibility and safety of the entrance area during nighttime.

In line with the college's commitment to sustainability, a study is currently being conducted to assess the feasibility of installing solar panels on campus. This study aims to evaluate the potential benefits, costs, and logistics of transitioning to solar energy.

3.2.9 Waste Management

Karim City College recognizes that proper waste management is essential for a well-defined ecosystem and is a crucial aspect of campus development. The college is committed to the "Clean and Green Campus" mission, which encompasses the management of solid waste, liquid waste, biomedical waste, and e-waste. Collaborating with various NGOs, the college continually introduces new initiatives to sustain and energize this mission.

Key Initiatives:

- Waste Collection and Segregation:
  - Installation of Waste Bins: Multiple waste collection containers have been strategically placed around the campus. Students are encouraged to correctly identify and dispose of waste in these bins.
  - Training of Utility Staff: A team of trained utility workers is engaged on campus, proficient in waste segregation and management

- Recycle Station Collaboration
    - Partnership with KORU FOUNDATION: A “Recycle Station” has been established in collaboration with KORU FOUNDATION. The station promotes the concept “Waste is not waste until we waste it.”
    - Concept: The Recycle Station encourages the community to view waste as ‘recyclables,’ fostering resource conservation and environmental protection.
- Awareness and Education:
    - Waste Management Drives: Regular awareness drives are conducted to educate students on proper waste management.
    - Community Outreach: Nearby villages are educated on waste management basics and encouraged to adopt sustainable practices.
- 3R Strategy Implementation:
    - Reduce: Efforts to minimize waste generation.
    - Reuse: Promoting the reuse of items after proper segregation and cleaning.
    - Recycle: Segregated recyclable items are handed over to appropriate agencies.
- Plastic Ban Initiatives:
    - Campus Messaging: Clear messages about the plastic ban are displayed across both the Sakchi and Mango campuses
- Composting Initiative:
    - Composting Mesh at Sakchi Campus: A composting mesh has been set up at the Sakchi campus for organic and garden waste, converting it into useful compost for campus gardens.

3.2.10 Solid waste management:

Karim City College is committed to effective waste management as part of its "Clean and Green Campus" mission. This mission includes the management of solid waste (biodegradable and non-biodegradable), liquid waste, biomedical waste, and e-waste. The college collaborates with various NGOs to sustain and enhance these initiatives.

Key Initiatives:

- Solid Waste Management:

- Biodegradable Waste:
  - Types: Includes vegetable peels, dry leaves, and food waste.
  - Usage: Segregated and used as bio-fertilizers for the campus gardens.
  - Composting: A composting pit measuring 2m x 2m x 2m converts these wastes into organic fertilizer.

- Non-Biodegradable Waste:
  - Types: Includes minimal use of polythene bags, plastic, glass, and metal wastes.
  - Reduction Measures: Polythene bags are minimized or avoided entirely to maintain a plastic-free campus.
  - Alternatives: The campus café has replaced disposable plastic cups and plates with steel plates and earthen cups.

Recycle Station:

- Location: Situated in front of the student canteen.
- Function: Glass and metal wastes are collected in well-marked bins and sold to recyclers.
- Awareness: Notifications and signs promoting the ban on single-use plastic are displayed at strategic locations.

Waste Segregation:

- Binning System:
  - Separate Bins: Provided for biodegradable and non-biodegradable waste at source.
  - Dedicated Bins: Specific bins for biodegradable, plastic, food waste, and non-biodegradable waste.

- Metal and Wooden Waste: Stored and sent to authorized scrap agents.

Garden and Lawn Waste:

- Tree Droppings and Lawn Management: Major sources of solid waste, handled through separate dustbins for biodegradable and plastic waste.

Awareness and Training:

- Ground Staff Meetings: Regular meetings with ground staff to discuss campus cleanliness and proper waste disposal practices

THE RECYCLE STATION

3.2.11 E-waste management

Overview:

Karim City College is dedicated to the proper management of e-waste, which consists of electronic devices discarded after they have reached the end of their useful life. The e-waste generated on campus primarily includes outdated computer systems, keyboards, electronic kits, battery cells, calculators, CDs, and similar items.

Key Initiatives:

- Systematic Collection and Disposal:
    - E-Waste Types: Includes out-of-use electronic devices such as computer systems, keyboards, electronic kits, battery cells, calculators, CDs, etc.
    - Collection Process: E-waste is systematically collected on campus and prepared for appropriate disposal.
- Partnership for Disposal:
    - MoU with M/S HULLADEK Recycling Pvt Ltd: The college has signed a Memorandum of Understanding (MoU) with M/S HULLADEK Recycling Pvt Ltd to ensure smooth and proper disposal of e-waste.
    - Purpose: This partnership aligns with the E-Waste Management Rules, 2016, and ensures compliance with government regulations.

Impact and Benefits:

- Environmental Compliance: Ensures that e-waste is disposed of in an environmentally friendly manner, complying with legal requirements.
- Sustainable Practices: Reinforces the college's commitment to sustainable waste management practices.

E-WASTE COLLECTION STATION

3.2.12 Green area management

Overview:

Karim City College's campuses at Sakchi, Mango, and Sundernagar feature diverse tree species that provide numerous environmental benefits. These trees, planted through various university programs, have become integral to the institution.

Key Contributions:

- Environmental Benefits:
  - Oxygen Production and Air Quality: Trees supply oxygen and improve air quality.
  - Climate Regulation: They moderate the effects of sun, rain, and wind, and help conserve water and soil.
  - Wildlife Support: Trees provide food and shelter for various bird species and other wildlife.

- Biodiversity and Aesthetics:
  - Species Variety: A wide range of tree species enhances biodiversity.
  - Seasonal Beauty: Trees display changing shapes, forms, textures, and colors throughout the year.

- Quality of Life:
  - Enhanced Environment: Trees improve the quality of life for the college community and nearby residents by cooling the campus and providing aesthetic and health benefits.

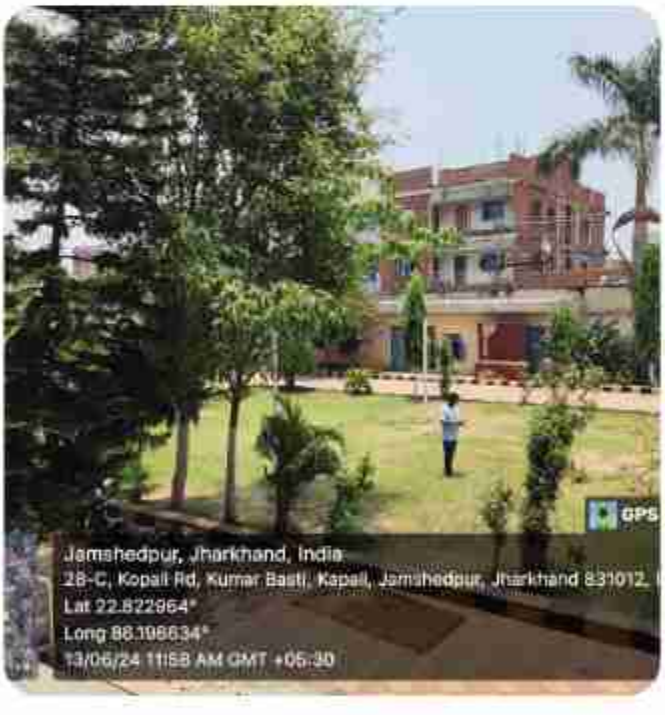
Recommendations:

- Ongoing Plantations: Continue tree planting programs.
- Biodiversity Monitoring: Regularly monitor tree health and diversity.
- Community Involvement: Engage the local community in conservation activities.

Table: List of tree species at all campuses -

Sl No	Common Name	Botanical Name	Uses	Numbers
1	Coconut tree	Cocus nucifera	Anti-microbial	10
2	Mango tree	Mangifera indica	Anti-bacterial, Anti-Fungal	20
3	Ashoka Tree	Saraca asoca	Blood Disorder Tumor	6
4	Bottle palm	Hyophorbe Lagercaulis	Anaemia	10
5	Guava Tree	Psidium Guajava	Diabetes	8
6	Hoop Pine	Araucaria Cunningham	Flooring	2
7	Croton	Codiacum Variegatum	Biofuel	15
8	Belly Flower Plant	Jasminum Sombac	infections	7
9	Rose	Rosaceae	Anxiety	15
10	Lemon	Citrus Limon	Anti-cancer Anti-Oxidant	10

PLANTATION IN THE SAKCHI CAMPUS



GREEN COVERAGE AT THE MANGO CAMPUS

GARDEN AT SUNDERNAGAR CAMPUS

3.2.13 Use of Bicycles :

At Karim City College, students and non-teaching staff commute by bicycle, supported by a dedicated cycle shed for vehicle safety. This green initiative helps reduce environmental pollution and carbon footprints. Additionally, the college pathways are laid with permeable paver blocks, facilitating rainwater seepage and ground water recharge.

Key Initiatives:

- Sustainable Transport:
  - Bicycle Commute: Encourages students and staff to use bicycles, reducing environmental pollution and carbon emissions.
  - Cycle Shed: Constructed to provide secure parking for bicycles.

- Eco-Friendly Infrastructure:
  - Permeable Pathways: Pathways with paver blocks allow rainwater to seep through, recharging the groundwater and preventing waterlogging.

3.2.14 E - communication

Karim City College has implemented efficient e-governance and digital infrastructure to enhance communication and reduce paper usage.

Key Initiatives:

- LAN Network:
  - Connectivity: All departments, the examination cell, and laboratories are well-connected through an efficient LAN network.
  - Digital Communication: Inter-office correspondence is conducted via email, significantly reducing paper usage.

- E-Governance Implementation:
  - Areas of Operation: E-governance is implemented across various areas of operation within the institution.
  - Collaboration: The college partnered with Master Soft in the 2021-2022 session to implement these digital solutions.

Particulars(e-governance)	Year of implementation
Administration	2018
Finance and accounts	
Student Admission and support	
Examination	

4.0 Conclusion

This audit involved discussions, questionnaires with various teams, and interactions with key personnel on a wide range of environmental issues. The college is dedicated to considering the environmental impacts of its actions and strives to act in an environmentally responsible manner.

Key Findings:

- LED Lighting: Classrooms, lecture halls, and many strategic locations are fitted with LED lights and tubes.
- Solid Waste Management: Solid waste is segregated and collected at the recycle station for appropriate recycling and disposal.
- Rainwater Harvesting: The main administrative buildings are equipped with a rainwater harvesting system.
- Noise Reduction: Generators are fitted with acoustic chambers to minimize noise pollution.
- Greenery and Landscaping: The campus features extensive greenery and well-maintained landscaping.

Recommendations:

- Water Audit: Conduct a water audit and balance to ensure efficient water usage.
- Reuse of Treated Water: Implement the reuse of treated water for gardening purposes.

5.0 Recommendations

- Energy Efficiency:
  - Renewable Energy: Support more renewable and carbon-neutral electricity options in any energy-purchasing consortium, aiming to supply all college properties with such sources.
  - LED Lighting: Increase the installation of LED lights to reduce power consumption for lighting.
  - High-Efficiency Appliances: Use 5-star rated air conditioners, fans, and CFLs.
  - Switch-off Drills: Conduct regular switch-off drills and shut down electricity from the main building supply after occupancy hours to prevent power loss due to eddy current.
  - Regular Cleaning: Clean tube-lights and bulbs periodically to remove dust and maintain efficiency.

- Water Management:
  - Overflow Monitoring: Implement monitoring and control measures for water overflow and arrange periodic supervision drills.
  - Water Audits: Conduct water audits and balancing to ensure efficient water usage.
  - Treated Water Reuse: Reuse treated water for gardening purposes.

- Waste Management:
  - Biogas Unit: Introduce a biogas unit to utilize biodegradable and food waste.
  - Waste Recycling Plans: Develop various recycling plans for different types of waste.
  - Paper Waste: Send paper waste, such as answer sheets, old bills, and confidential reports, for shredding, pulping, and recycling after their preservation period.

- Environmental Impact:
  - Eco-Friendly Cleaning Products: Ensure that all cleaning products used by staff have minimal environmental impact.

- Green Initiatives:
  - Tree Management: Periodically review the list of trees planted in the garden, allot numbers to the trees, and maintain records.
  - Indoor Plantation: Encourage indoor planting to foster interest in students, with bonsai plants in corridors to strengthen their connection with nature.
  - Greenery and Landscaping: Continue to enhance the campus with extensive greenery and well-maintained landscaping.

6.0 References

- The Environment (Protection) Act – 1986 (Amended 1991) & Rules – 1986 (Amended 2010)
- The Water (Prevention & Control of Pollution) Act – 1974 (Amended 1988) & The Water (Prevention & Control of Pollution) Rules – 1975
- The Air (Prevention & Control of Pollution) Act – 1981 (Amended 1987) & The Air (Prevention & Control of Pollution) Rules – 1982
- The Noise Pollution Regulation & Control Rules – 2000 (Amended 2010)
- Energy Conservation Act – 2010
- E-Waste Management Rules – 2016
- Electrical Act – 2003 (Amended 2001) & Rules – 1956 (Amended 2006)
- Relevant Indian Standard Code Practices

7.0 Transparency of Green Audit Report

The green audit report serves as a valuable tool to demonstrate an organization's commitment to openness and transparency. Karim City College believes in maintaining complete transparency with its stakeholders and has nothing to hide from them.

KARIM CITY COLLEGE

JAMSHEDPUR, JHARKHAND

KARIM CITY COLLEGE
Jamshedpur, Jharkhand (INDIA)

GREEN AUDIT REPORT 2022

KORU
FOUNDATION

KORU FOUNDATION

JAMSHEDPUR

Executive Summary

The initiative taken by Karim City college to conduct a Green Audit of the college campus of three locations is a commendable sustainable goal. The strategies followed were the preparation of questionnaires and subsequent action plans to implement the project.

Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation.

The 'Green Audit' was carried to analyse environmental practices within the campus, which have an impact on the eco-friendly ambience of university. The primary goal of the green audit is to secure the best practices for environmental sustainability. It reduces the possibilities of health hazards and threats for the students of the campus. There are several norms and standards in the environmental management system, and the green audit helps to conform to the norms. The audit also helps identify the ideal protocols that develop a sustainable ecosystem on the campus.

Questionnaires prepared to conduct the green audit were based on the guidelines, rules, acts, and formats set by the Government of India, Ministry of Environment and Forest, New Delhi, and Central Pollution Control Board, New Delhi. Questionnaires were prepared for solid waste, energy, water, hazardous waste, and e-waste. For audit purposes, analysis of suitable data is required, for the same study area is grouped into various Blocks and Departments. The audit was carried out for solid waste, electricity and energy, water and wastewater, illumination, noise level, and green inventory. It also indicates the green initiatives taken by universities to save environmental resources.

KORU

CERTIFICATE

PRESENTED TO

KARIM CITY COLLEGE

Sakchi, Jamshedpur, Jharkhand 831001

Has been assessed by KORU FOUNDATION for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory,

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

SIGNATURE

03/05/2022 - 18/05/2022

Date of Audit

KORU FOUNDATION, H.NO 38605, HILL VIEW COLONY, DIMNA

www.thekorufoundation.org | thekorufoundation@gmail.com

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1.0 Introduction

1.1 Need for green audit

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity.

It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

The different steps under the green audit consist of – Water audit, waste disposal audit, energy audit, and environmental quality audit including illumination and noise level in the campus. With the green audit reports, the universities can also recognize cost-effective methods for waste management. It allows universities to set and promote an enhanced learning ecosystem and obtain the top grade. More than that, it helps in exhibiting a credible branding of the educational university.

1.2 Objectives of the audit

The main objective of green audit was to understand the current practices of sustainability with regard to the use of natural resources, energy utilisation, generation of wastes and management in environmentally friend way. Focus was on establishing a baseline of existing environmental conditions with focus on natural and physical environment. Creating awareness among students and staff concerning real issues of environment and its sustainability. To create a report that document baseline data of good practices and provide strategies and action plans towards improving environmental quality for future.

1.3 Green Audit Process -

- Understand the scope of audit
- Analyze the strengths and weaknesses of the internal environment.
- Conduct the audit
- Evaluate the observations of audit program.
- Prepare a report of the observations side by side.

1.4 Benefits of Green Audit:

- If Green Audit is enforced in an effective way, then there are many advantages that could be adopted from it.
- Recognize the cost saving methods through waste minimizing and managing strategies.
- Point out prevailing and forthcoming complications.
- Empower the organizations to frame a better environmental performance.
- Enhance the alertness for environmental guidelines and duties

1.5 Methodology of Green Audit.

- Formation of core team for green audit and Kick-off meeting and discussions.
- Primary data collection of energy, water and solar plant details / monitoring of environmental parameters such as noise level and illumination.
- Analysis of data and representation of data analysis.

1.6 Audit Participants

On behalf of KCC

Sl No	Name	Designation/Departments
1	Dr. Aley Ali	HOD Geography, Coordinator NSS
2	Dr. Fakhruddin	Coordinator NCC
3	Dr. S.M. Yahiya Ibrahim	HOD English, Coordinator IQAC
4	Dr. Neha Tiwari	Prof in charge, DoMCVP & Convenor IEIC
5	Dr. Aftab Alam Khan	HOD Botany
6	Dr. Shahsiprabha Pandey	HOD Zoology

On behalf of Koru Foundation

Sl No	Name	Position	Qualifications/Experience
1	Ajit Kumar Singh	Lead Auditor	M.Sc., PGDEPCT, PGDEMS, Lead Auditor ISO 14001: 2015, 20 years' experience in EMS & Compliance.
3	Madhulika Singh	Co-Auditor	Bachelor in political science, MSW
3	Dipak Soni	Co-Auditor	B.Sc. (IT) Project Manager. Working in social and environment sector last 5 years.

1.7 Onsite Visit

Audit Stage Green Audit was done with the help of co-associates involving different student groups, teaching, and non-teaching staff. The green audit began with the kick-off meeting with core team followed by teams walking through all the different facilities at the college campus at Sakchi, Mango and Sundernagar, determining the different types of utility patters waste management, environmental parameters. The staff and learners were interviewed to get details of usage, frequency, or general characteristics of environmental parameters. Data collection was done in the sectors such as Energy, Waste, Green Area, and Water use. College records and documents were verified several times to clarify the data received through surveys and discussions.

1.8 Focus Group Discussion

The scope and objectives of the audit and pre-audit discussions were held on the basis of green initiatives taken and the current scenario of the college campus. This meeting is an important prerequisite for the green audit because it is the first opportunity to understand the concerns. The meeting was an opportunity to gather the information that the audit team can study before arriving on the site. The audit protocol and audit plan were handed over at this meeting and discussed in advance of the audit itself. The pre-audit meeting was conducted successfully and necessary documents were collected directly from the college before the initiation of the audit processes. The actual planning of audit processes was discussed in the pre-audit meeting. An Audit team was also selected in this meeting with the help of staff and the college management. The audit protocol and audit plan were handed over at this meeting and discussed in advance of the audit itself.

1.9 Management Commitment

The Management of the college has shown a commitment towards green auditing during the pre-audit meeting. They were ready to encourage all green activities. It was decided to promote all activities that are environmentally friendly such as awareness programs on the environment, campus farming, planting more trees on the campus, etc., after the green auditing. The management of the college was willing to formulate policies based on a green auditing report.

2.0 About Karim City College (KCC)

Established in 1961 by our Founder Father Late Syed Tafazzul Karim with a view to impart education to the weaker section of Jamshedpur specially Muslims, Karim City College has now become a premier educational institution of eastern India.

After the sad demise of our founder his son Late S.M. Shafiq patronised the institution with his leading from the front attitude. His death in 1992 created a void which was successfully and graciously filled by our present trustee Mr. Syed Ashfaque Karim whose modern and progressive approach is taking the college to greater heights.

Located in the heart of the city of Tatas, the College possesses a student friendly infrastructure, education centre activities and knowledge-oriented ambience. Around 6,700 students are enrolled at present at UG and PG level pursuing their studies in five faculties and 22 departments. Run and managed by Karim's Trust, Jamshedpur and permanently affiliated to Kolhan University, Chaibasa. Karim City College is known for its discipline, quality services and dedication. Under the empirical approach of our present trustee the College surged ahead in infrastructure facilities with the development of our new campus at Mango. Academic excellence is a pursuit for us and we are constant in our pilgrimage towards House Beautiful. The College had CPE status under 11th plan of UGC. It has been re accredited by NAAC in 2012.

2.0 Focus

We as an Institution focus on our students who provide us a reason for our existence. All our efforts are directed towards inculcating a constant yearning for learning.

2.2 Vision & Mission

2.2.1 Vision

Karim City College is a Muslim Minority Institution run and managed by Karim Trust, Jamshedpur, with permanent affiliation to Kolhan University, Chaibasa. Founded by Late Syed Tafazzul Karim, with the intention of promoting education among the weaker sections, particularly the Muslims, the college was established in 1961 with

pre-university courses. Degree courses were launched in the year 1963. The institution achieved milestones with affiliation being acquired in 1965 for its degree courses of Arts and Commerce. It's growth was accelerated by the establishment of its Faculty of Science in the year 1978. In the last fifteen years, after its first cycle of accreditation, the institution has witnessed a steady course of progress. In 2004 the

college went for its first assessment by NAAC and was awarded a grade of B+. In the year 2010, the college was accorded CPE status by the UGC. The college went for its second cycle of accreditation in the year 2012 and was awarded Grade B with Grade Point 2.88. In the year 2013, the institution inaugurated a new campus at Mango to which its Faculty of Education was shifted. The college has zealously and consistently promoted extra-curricular activities. The college offers consistent encouragement to active social engagement and welfare activities. Discipline constitutes an important institutional concern. The institution focuses on character building through teaching and co-curricular activities. Today, the institution is proud to have its alumni disseminated across all parts of the country, rendering their services to society in various professional capacities.

Mission

Karim City College is the dream fulfilment of our visionary founder Late Syed Tafazzul Karim, who established the institution with Pre-University Courses in 1961 with a mission to impart quality education and to provide better opportunities of higher education to the weaker sections of the society particularly to the Muslim minority. Hence, all our efforts are targeted towards the attainment of this basic goal. The modern world and its challenges demand a constant renewal, a fresh approach and a process of change and adaption in the arena of higher education. The college is open to changes, innovations and improvisations. We are determined to acquire and provide the best in the field of higher education service towards self-fulfilment of our stakeholders in our constant goal. We are helping the students with the intention to enable them to help themselves. We are striving for the personal growth and leadership skills of our students empowering them to become responsible and cosmopolitan citizens. Building relationships, developing integrity and accountability, creating a sense of respect, service and fellow feeling and inculcating the rich cultural ethos of India? all are our constant efforts towards the building of the nation and a safe society. We are constantly trying to create a modern, peaceful, progress oriented and knowledge-based society with an emphasis upon research, innovation, production and not a sheer merits behaviour. We are constantly trying to create a great sense of understanding among our students with regard to India's plurality of religion and composite culture.

2.2 Geographical Location

The college is spread over 7.66 Acres of land in Sakchi campus (leased land area 0.88 Acre), Mango campus (1.190 Acre) and Sundernagar (5.59 Acre) in Jamshedpur city.

2.2.1 Buildings/blocks

The main building at Sakchi campus includes administration, class rooms, and different departments. In addition, auditorium building in which seminars and programmes being conducted for college. The Mango campus includes facilities class room, library, reading room, common room, practical activities room and auditorium. The sundernagar campus especially developed green garden and green patches.

2.2.2 Facilities available in college.

The College library possesses a rich collection of text books and reference books to support the educational need of students and faculty members. Every year a good number of books are added in the stock. Efforts are made to update the library and make it more user friendly. The library has a Faculty Studies (for teachers) and a separate reading room for students. It also has Central Xerox facility for its users where they may get relevant books and reference materials photocopied in a subsidized rate. With the assistance of UGC, New Delhi the College library has started Book Bank Scheme for needy and meritorious students.

The Ministry of Human Resource Development (MHRD) Govt. of India, UGC, NAAC and other policy making agencies have always emphasised to work in the direction of making the curriculum career oriented and to enhance the employability of students. Experts in the field of education are of the opinion that employability rather than employment is a major issue of our students. The college plans to take initiative in this regard by the creation of Employability Enhancement Unit which will work as an umbrella organisation and will KARIM CITY COLLEGE a proper functioning of the Career Planning & Guidance Cell and Placement Cell.

Two separate common rooms for boys and girls with facilities like Table Tennis, Carrom Board, Chess, Ludo, Chinese checker, magazines and newspapers.
The common room organises indoor games like Carrom, Chess and Table tennis for the students every year.

NAME OF COURSE	DURATION	EXAMINING BODY
B.A. Honours Programme (Bangla, Economics, English, Geography, Hindi, History, Philosophy, Pol. Science, Psychology, Urdu)	3 years	Kolhan University, Chaibasa
B.Sc. Honours Programme (Botany, Chemistry, Maths, Physics, Zoology)	3years	Kolhan University, Chaibasa
B.Com. Honours Programme (Financial Accounts)	3 years	Kolhan University, Chaibasa
B.A. Programme (Pass Course)	3 years	Kolhan University, Chaibasa
B.Sc. Programme (Pass Course)	3years	Kolhan University, Chaibasa

B.Com. Programme (Pass Course)	3 years	Kolhan University, Chaibasa
Bachelor in Mass Communication - Video Production	3 years	Kolhan University, Chaibasa
Bachelor of Computer Application (BCA)	3 years	Kolhan University, Chaibasa
B.Sc. Hons. (Information Technology) (B Sc. IT)	3 years	Kolhan University, Chaibasa
Bachelor of Education (B.Ed.)	2 years	Kolhan University, Chaibasa
Diploma in Elementary Education (D.El.Ed.)	2 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Certificate (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Diploma (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
ADD-ON (Vocational) Advance Diploma (Advertising Sales Promotion and Sales Management, Aqua Culture, Computer Application (C.A.), E-Commerce, Functional English, Mass Communication, Pollution Control Management, Information Technology (I.T.), Industrial Chemistry)	1 years	Kolhan University, Chaibasa
M.A. in Urdu	2 Years	Kolhan University, Chaibasa
M.A. in Psychology	2 Years	Kolhan University, Chaibasa
M.A. in Mass Communication	2 Years	Kolhan University, Chaibasa
M.Com.	2 Years	Kolhan University, Chaibasa
M.Sc. in Mathematics	2 Years	Kolhan University, Chaibasa
Certificate Course in Foreign Languages Arabic / French / German	80 Hrs/3months	Karim City College
Certificate Course in Tribal Languages Ho / Santhali	80 Hrs/3months	Karim City College
Certificate Course in Professional's English	100 Hrs/4 months	Karim City College
Certificate Course in Modern Indian Languages Urdu / Bangla	40 Hrs	Karim City College

Sakchi Campus

Mango Campus

3.0 Green Audit

3.1 Questionnaires

Sl No	Audit Questions	Answers/Remarks
1.1	**General information**	
1	Does any Green Audit conduct earlier?	No.
2	What is the total strength (people count) of the Institute?	Approx. 6000
3	What is the total number of working	200

	days of your campus in a year?	
4	Where is the campus located?	Sakchi, Mango and Sundernagar, Jamshedpur
5	Municipal waste, Sewer line, waste water managed by?	Jamshedpur Notified area committee, JUSCO, Mango Municipal Corporation and Jamshedpur Zila Parishad area.
1.2	**WASTE MINIMIZATION AND RECYCLING**	
1	Does your institute generate any waste? If so, what are they?	Solid waste.
2	What is the approximate amount of waste generated per day? (in KG approx.)	120 kg
3	How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)	Single use plastic is banned on the campus. Composting is done for horticulture waste management. Solid waste (Both dry and wet) is managed by segregation in recycle. Paper waste is sent to scrap vendor periodically. KARIM CITY COLLEGE signed MOU with e-waste recycler.
4	Do you use recycled paper in institute?	Yes, KCC collaborates with third party recycle vendor.
5	How would you spread the message of recycling to others in the community?	Seminars and webinars for students and faculty Nukkar-Natak by Students to increasing awareness. Various campaigns for awareness are organised by NSS team.
1.3	**GREENING THE CAMPUS**	
1	Is there a garden in your institute?	Yes
2	Total number of Plants in Campus?	Full Grown Trees, Small Trees, Hedge Plants.

3	How many Tree Plantation Drives organized by campus per annum?	Yes. No. of plantation drives in last years.
4	Is there any Plant Distribution Program for Students and Community?	Yes
1.4	**WATER AND WASTEWATER MANAGEMENT**	
1	Sources of water	JUSCO, Municipal water supply and Ground water.
2	Water usage details.	Drinking, Gardening Kitchen & Toilets.
3	How does your institute store water? Are there any water saving techniques followed in your institute?	Sump tank and Overhead Water tanks.

3.2 Data analysis and final report preparation

Proper analysis and presentation of data produced from work is a vital element. In the case of a green audit, the filled questionnaires of the survey from each group were tabulated as per their modules, in Excel spreadsheets. The tabulated data is then used for further analysis. For a better understanding of the results and to avoid complications, averages, and percentages of the tables were calculated. A graphical representation of these results was made to give a quick idea of the status. Interpretation of the overall outcomes was made which incorporates all the primary and secondary data, references, and interrelations within. Final report preparation was done using this interpretation

The study covered the following areas to summarize the present status of environment management in the campus:

As part of green audit of campus, the Green Audit Assessment Team has carried out the environmental monitoring of campus. This includes Illumination, Noise level of the class rooms. It was observed that illumination and ventilation is adequate considering natural light and air velocity present. Noise level in the campus is well below the limit.

3.2.1 Air Quality:

The air quality being monitored by the local authorities of the township. The campus is situated at middle of Jamshedpur. The air quality index –

Jamshedpur air quality index (AQI) forecast

Pollution level	**Wind**
Moderate 80 AQI	**14.4 km/h**

3.2.2 Illumination level

In order to improve education environment, classrooms need a good lighting. A good lighting makes the students feel safe, improves learning. In addition to this strengthen the schools brand value. In many studies stated that there is a close relation between lighting and the performance of the students.

250 lux light level is sufficient in classroom where students spend most of their times and focus on learning. In order to draw attention to the area where the teacher is located, to contribute to the students' concentration of 750 lux light level can be done here. An illumination study was carried in different class rooms with value of 365 to 585 lux.

Illumination study carried in college

3.2.3 Noise Level

The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound: Loudness and Frequency.
Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. A whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerate. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibrations per second. It is denoted as Hertz (Hz).

Noise level meter Lutron was used to measure the noise level at different locations in the university campus.

Sl No	Locations	Sound level (dB)
1	At court yard of college at Sakchi campus	65 dB
2	At Main Gate at Sakchi Campus	68 dB
3	Teachers common room at Mango campus	65 dB
4	In office entrance area at Mango campus area	71 dB

Noise level monitoring at Sakchi and Mango Campus

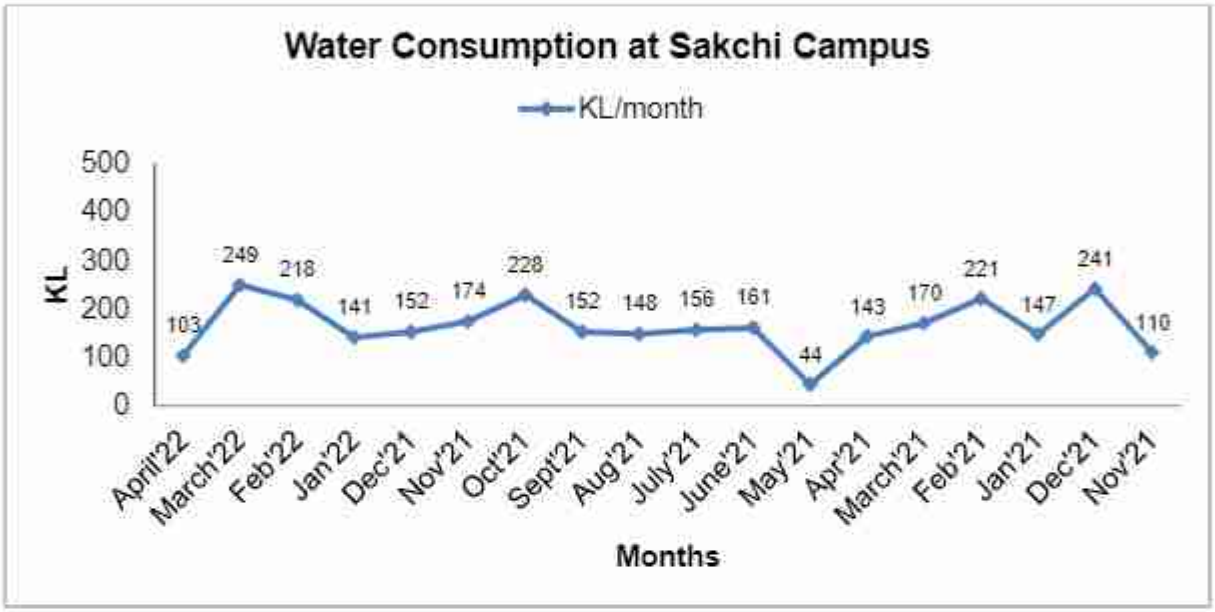
3.2.4 Water management

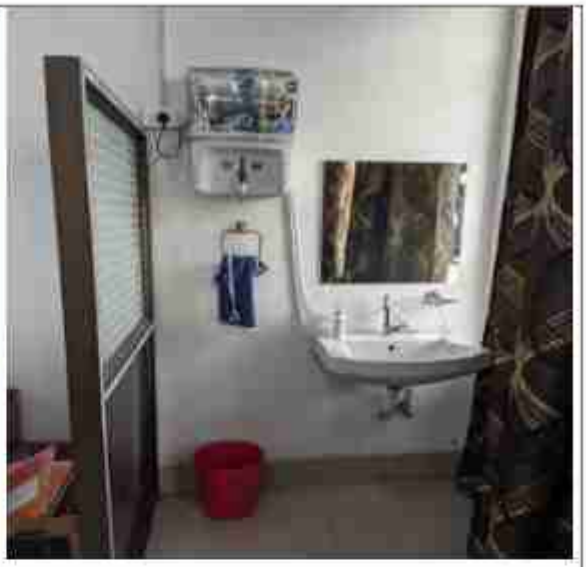
Water is one of the most important elements in our environment. The main uses of water in university are for drinking, cleaning, gardening, food preparation, recreational purposes, in laboratories, and for bathroom.

Water quality testing is important because it identifies contaminants and prevents water borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to KARIM CITY COLLEGE that drinking water is safe, clean and free from bacteria and disease. The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human KARIM CITY COLLEGE, or in the environment.

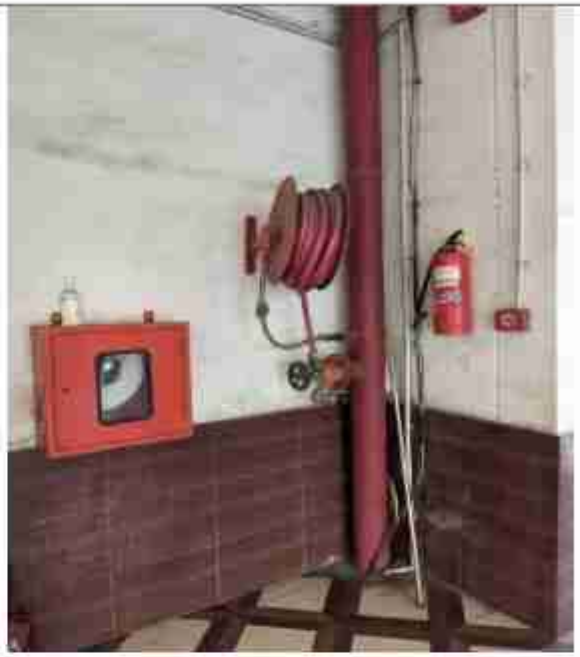
The source of water is from JUSCO and Mango Municipal Corporation, Jamshedpur. The supplied water being stored in overhead tanks and supplied for different purposes. The buildings are attached to each other so, the storage tanks are installed at top of building. Approx 06 Nos of tanks are installed with capacity of 2000 litres each.

The average water consumption per month is approx. 165 KL/month at Sakchi campus and approx. 200 KL at Mango Campus.





Water storage at Sump tank, overhead tanks and drinking water facilities at Mango Campus



Fire Hydrant with Jocky Pumps

3.2.5 Drinking water

The water used for drinking purposes is clean and well-maintained. Total 06 numbers of RO units are Installed in the campus and available on all floors of the university to provide safe drinking water.

Water Quality Assessment Water samples from the KCC were collected and analysed for its quality parameters. The major parameters analysed include colour, pH, Total dissolved solids, and total suspended solids.

Microbial analysis Worldwide, water-borne infections are a major contributor to illness and fatalities. The protection of the public's health depends on routine microbiological testing of drinking water sources, recreational waters, and environmental waters.

Water sources and RO with water cooler at Sakchi Campus

3.2.6 Rain Water harvesting system

The Rainwater harvesting system with Recharge pits well inside the campus Rain water harvesting units are also functioning for recharging ground water level. There are soaking pits available widespread all over the campus. The collected rooftop water is collected in the recharge wells.

Rain water sytem at Sakchi Campus



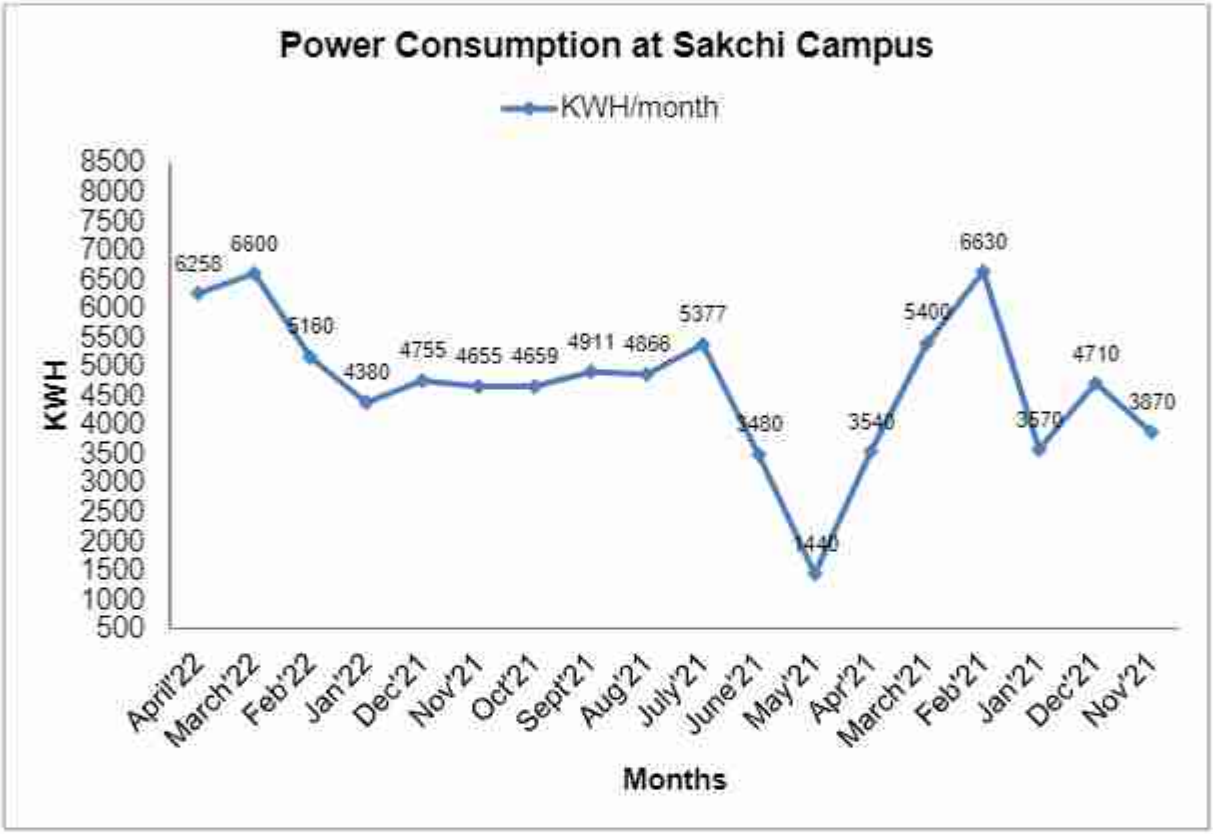



Rain water system with down comer and water collection circuits at Mango Campus

3.2.7 Energy Conservation

This indicator addresses energy KARIM CITY COLLEGE, energy sources, energy monitoring, lighting, appliance, natural resources. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

Monthly average energy consumption of KARIM CITY COLLEGE 4681 KWh/month.



Power generation by Generator at Sakchi Campus:

60 KVA Mahindra (1No.)

Power generation by Generator at Mango Campus:

125 KVA Mahindra (1No.)

LED in gallary

DG Set

LED lights lecture room at Sakchi Campus


Sharda
Sharda Diesels Pvt. Ltd., Ranchi
This Product confirms to the Environment (Protection) Rules, 1986
po erol

DG set and power supply system. LED lights fitted in class room and Computer lab. at Mango Campus

Table – Electrical Equipments at College.

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			Led Tube	Led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/ Sound System	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split Ac	Cleaning Mc	Cooler	Water Dispenser	Water Filter	Bio Matric	Induction Cooker	Elect Kettle	Xerox Mc	Motor Pump 1.5 HP	D.G Set- 100 kw	Lab Equipment	Computer /UPS	Printer/Scanner	Networking System	Refrigerator	Microwave	CCTV Monitor	T O T A L
GROUND FLOOR																																		
1	East Side	Main Entrance	6		11	2		1	5				1																					25
2		Section Office	8									3			1				1				1	1				2	1		1	1		20
3		Principal Chamber	1			8					1	1	1			1																	2	15
4		CKMS Computer Lab			5							1																14						20
5		CKMS Computer Lab			8							2																10						20
6		CKMS Head Master	3			9						3				1						1												17
7		CK Plus 2 Library			6							2	1																					9
8		CKMS Staff Room	2		2							2																						6

9		CKH S Scie nce Lab			11								2	1																							14
10		Kitch en	1																					1														2
11	west side-1	Accu nts	14										3	3					1			2			1				5	4							35
12		Admi n	17										5	1					1										10	6							41
13		CKH S Hea d mast er		14	7								1	1			1												2	2			2				30
14		Class Room 1 to 3			18								6																								24
15	north side	Libra ry			31								11												1				4	2							45
16		Virtu al Libra ry			6	1							3	1															14								24
17		Staff Toile t-M	3		5											2																					10
18	west side-2	Facu lty Study	8								1	1	5	2			2			1	1		1						1								24
19		Rest ring Room	16										6																1								15
20		Staff Toile t-F	4													1																					5
21		IQA C	5								1		2				1												2	2							13
22		Help Desk . Back Side				6								1															1								8
23		Back side Gate		7	1		4	1																		3											16
24		Cant eem			9								5	4		2																					21
25	south side	Stud ent Toile t	1		4											1																					5
26		Boy' s Com mon Room			16						1		3						1																		26
27		Exa minu tion Dept			11								8	2			1								1				3	2							26
28		Pant ry			3								1										1														5
29		DG Room			5								1														1										7
30		Fron t Side Corridor	19						3				1																								23
31		4 Sides Corridor	2		26		2		3				2	1			1		1																		32
		TOTAL	107	21	177	26	8	2	11	3	2	39	20	0	7	7	1	5	3	1	2	4	1	4	3	1	0	98	15	0	1	1	4	555			

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			led Tube	led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/ Sound System	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split AC	Window AC	Cooler	Water Dispenser	Water Filter	Bio Metric	Induction Cooker	Elect Kettle	Xerox M/c	Motor Pump	D.G Set	Lab Equipment	Computer /UPS	Printer/Scanner	Networking System	Refrigerator	Microwave	CCTV Monitor	TOTAL
1ST FLOOR																																		
1	East Side	Commerce Dept	7			12							2			1												2	3					27
2	East Side	Room No-9	1		8						1	5																						15
3	East Side	Room No-8	2		8							3																						13
4	East Side	Staff Room	1		4	13			2			2																1						23
5	East Side	Room No-7	2		8							3																						13
6	East Side	Room No-6	2		8							3																						13
7	East Side	Math Dept	6			7						4	1															10	1					29
8	West Side-1	Room No-10	2		12							3																						13
9	West Side-1	Room No-11			10							3																						13
10	West Side-1	Room No-4	3		7							3																						13
11	West Side-1	Room No-5	3		7							3																						13
12	West Side-1	PG-Psychology Dept			6						1	3															4	1						15
13	North Side	NCC Room	2		2							2																1						7
14	North Side	Room No-12			8							6																						14
15	North Side	Room No-13			8							6																						14
16	North Side	Prayer Room			4							2																						6
17	North Side	Toilet			4										1																			5
18	West Side-2	Green Studio	10				6			1		5				2												2	2					28
19	West Side-2	E-Class 1	8									4				1																		13
20	West Side-2	Reading Room			12							4																						16
21	West Side-2	Shooting Studio	12			4	14			1	1	2	4			2												1	1					42
22	West Side-2	Mass Comm. Office	4	1								2			1	1												2	1					12

23	South Side	IGNOU	6	3		6						4				1												1	1					22
24		Room No-15	8								1	6																						15
25		Room No-16	2		5							4																						11
26		Room No-17	1		10							4																						15
27		NSS			4							1																						5
28		Front Side Corridor	5		11																													16
29		4 Sides Corridor	1		17																													18
		TOTAL	86	4	163	42	20	0	2	2	4	89	7	0	2	8	0	0	0	0	0	0	0	0	0	0	4	21	5	0	0	0	0	465

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			led Tube	led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/ Sound System	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split AC	Window AC	Cooler	Water Dispenser	Water Filter	Bio Matric	Induction Cooker	Elect Kettel	Xerox Mc	Motor Pump	D.G Set	Lab Equipment	Computer /UPS	Printer/Scanner	Networking Switch	Refrigerator	Microwave	CCTV Monitor	TOTAL
2ND FLOOR																																		
1	East Side	Botany Lab			26						1	10			1												5	1	1		1			44
2		UG-Psychology Dept	4		4							4																1	1					14
3		Science Staff Room				4				1		1				1			1				1											9
4		Chemistry Lab	2	6	23							15			4												28	2	2		1			83
5		Chemistry Store Room			2							1																1	1					5
6	West Side-1	Zoology Lab		5	18							11																2	1		2			43
7		Geography Store Room			2								1																					3
8		Geography Lab			11						1	5	1														4	1	1					24
9		Physic Lab			19						1	11															20	3	1					55

10		Add on Office			3							2				1												2						8
11		Room No-18			8						1	6																						15
12	North side	Room No-19	1		5							4																						10
13		E Class-2			12						1	4				1												1						19
14		Toilet Student			2										1																			3
15		Dip in Guidance Cons	7	1						4	1	6				1												2	1					23
16	West side-2	Room No-22	1		14							8																						23
17		Room No-23	1		10							6																						17
18		PG Urdu Dept			4							2				1												1						8
19		PG English Dept	6									2				1												1						9
20	South side	Girls Common Room	1		10					1		8			3																			23
21		Room No-24	2		10							10			5																			27
22		CK Plus 2 Office			2							1	1																					4
23		Front Side Corridor	3		7																													10
24		4 Sides Corridor			16														1															17
25		3 Staircase			14																													14
																																		0
		TOTAL	27	15	216	4	0	0	0	6	6	117	3	0	14	6	0	0	2	0	0	0	1	0	0	0	61	18	5	0	4	0	0	510

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			led Tube	led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/sound system	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split AC	Window AC	Cooler	Water Dispenser	Water Filter	Bio Matric	Induction Cooker	Elect Kettel	Xerox Mc	Motor Pump	D.G Set	Lab Equipment	Computer /UPS	Printer/Scanner	Networking Switch	Refrigerator	Microwave	CCTV Monitor	TOTAL
3rd FLOOR																																		
1	North Side	3 Sides			15														1															16

		Corridor																																
2		Toilet Student			2										1																			3
3		Room No-25			6							4																						10
4		Room No-26			6							4																						10
5		BSC-IT Lab			8						1	9				3												25						43
6		BSC-IT Office			4											1												2	2					9
7		Language Lab			4	12						5				2												22						46
8		PG-Application				12					1	6				3												12	1					35
9		Room No-27			4							4																						8
10		Room No-28			4							4																						8
11	South Side	CA Lab			8							5				3												25						42
12		Excel Programme			6							2																1	1					10
13		Toilet	1		1																													2
		TOTAL	1	0	58	24	0	0	0	0	2	42	0	0	1	12	0	0	1	0	0	0	0	0	0	0	0	87	4	0	0	0	0	242
		TOTAL G+1+2+3	223	41	624	56	26	2	13	11	14	337	30	0	24	35	1	2	5	1	2	4	2	4	3	1	65	155	41	0	5	1	4	1812

Power Consumption at Manago campus:

Sl No	Month	KWh	Rs. Paid
1	April'2021	1107	15096
2	Sept'2021	2277	71132
3	Oct'2021	4188	33962
4	Nov'2021	2849	60645
5	Jan'2022	2184	12384
6	Feb'2022	1399	17450

Electrical equipment at Mango campus.

Sl No	Equipment	Watt	Quantity
1	Fan	75	183
2	LED Tube lights	18	125
3	General Tube lights	36	175
4	Air Conditioners	1.05 T	9
5	Computer	140-150	63
6	Water cooler	1200	01

3.2.8 Solar Energy

Presently study of solar energy capability being study going on. Based on the capability with respect to space available solar energy system will be installed.

3.2.9 Waste Management

KARIM CITY COLLEGE is aware of the fact that proper waste management is one of the key necessities for a well-defined ecosystem. It is one of the important pillars for proper campus development. The University works on the mission of "Clean and Green Campus" which involves proper management of solid waste, liquid waste, Biomedical and E-Waste management. The University is working in collaboration with various NGOs as well which provides a road way and new initiatives are lined up to keep the momentum and the mission energized. Various ingenuities underway inside the campus are:

Various waste collection storage containers are installed at some points inside the campus and the students are encouraged to identity and dispose off the wastes at the appropriate places.

With the collaboration of **KORU FOUNDATION,** a **"Recycle station**" is installed with a concept of ***"Waste management: Waste is not waste until we waste it".***

Concept of Recycle station: To reverse our habits and redirect it in to saving our resources and our only home Planet home we are introducing the concept of seeing waste as 'Recyclables' through **RECYCLE STATION.**

A group of utility men are engaged in the campus who are well trained with the basics of waste segregation and management.

Waste management awareness drives are organized at regular intervals amongst the students of the university.

The nearby villages are also made conscious of the waste management basics and are encouraged to act accordingly.

The management of waste generated in the campus is in lines with the basic waste management strategy of 3R's: **Reduce, Reuse and Recycle** i.e., Reduce the amount of waste generated, Reuse everything to its maximum after proper segregation and cleaning and keeping things which can be Recycled aside and are thereafter handed over to appropriate agencies.

Well displayed message on Ban of Plastic in the both campus Sakchi and Mango campus.

Ban of plastic – Notice and display at Sakchi and Mango Campus

3.2.10 Solid waste management:

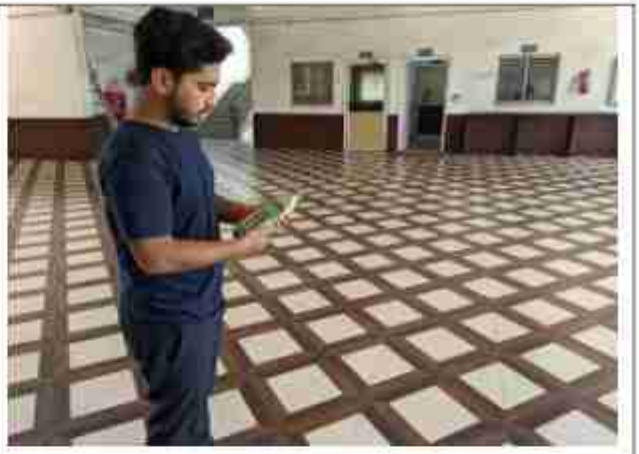
Solid wastes include both the biodegradable and non-biodegradable items. The biodegradable wastes generated in the campus are vegetable peels, dry leaves, food wastes etc. These are segregated and serve as excellent bio-fertilizers for the beautiful garden in the campus. Minimal or no use of polythene bags in the campus is practised to KARIM CITY COLLEGE plastic free campus. To promote no use of single use plastic KARIM CITY COLLEGE had issued notification and displayed at strategic locations.

Use and throw plastic cups and plates in the Campus café are replaced by either steel plates or earthen cups to reduce wastes. Glass and metal wastes are segregated at " **"Recycle Station"** situated in front of student canteen where collection being done in well-marked dedicated bins and sold to the recyclers.

The food wastes and non-biodegradable waste are also separated in separated in separate bins marked for the purpose. The biodegradable wastes undergo composting into a pit of dimensions 2m X 2m X 2m so that they can be converted into organic wastes for further utilization.

Waste generated from tree droppings and lawn management are major solid wastes generated in the campus. Separate dustbins are provided for Bio-degradable and Plastic waste in order to segregate them at the source itself. Metal waste and wooden waste is stored and sent to authorize scrap agents for further processing. Glass bottles are reused in the laboratories. The KARIM CITY COLLEGE has separate bins to collect biodegradable and non-biodegradable waste generated in the campus. Regular meetings are conducted with ground staff regarding the cleanliness of the campus and proper disposal of waste.

Recycle station for solid waste collection



Solid Waste Management and Clean floor area

3.2.11 E-waste management

E-waste is generated when the electronic devices are discarded after they are out of service and their life time is exhausted. The E-waste generated in the campus are mainly the out of use electronic devices like computer systems, keyboards, electronic kits, battery cells, calculators, CDs etc. They are systematically collected and sold out to for appropriate disposal. An MoU has been signed with **M/S. HULLADEK Recycling Pvt Ltd** for smooth and proper disposal of waste generated in the University. The purpose of this partnership in compliance with E- Waste Management) Rules, 2016. The partnership was made to pick, transport, carry and recycle/ dispose of the E-Waste as per norms prescribed by the government authorities from time to time.

E-waste bin installed by M/S. Hulladek

3.2.12 Green area management

The open area of college campus at Sakchi, Mango and Sundernagar campus is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmes organised by the university and have become an integral part of the institution. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the university in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many spices of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf – covered branches keep many animals, such as birds, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. Even individual trees vary their appearance throughout the course of the year as the seasons change. Thus, the college has been playing a significant role in maintaining the environment of its surrounding areas.

Table: List of tree species at all campuses -

Sl No	Common Name	Botanical Name	Uses	Numbers
1	Coconut tree	Cocus nucifera	Anti-microbial	10
2	Mango tree	Mangifera indica	Anti-bacterial, Anti-Fungal	20
3	Ashoka Tree	Saraca asoca	Blood Disorder	6

			Tumor	
4	Bottle palm	Hyophorbe Lagercaulis	Anaemia	10
5	Guava Tree	Psidium Guajava	Diabetes	8
6	Hoop Pine	Araucaria Cunningham	Flooring	2
7	Croton	Codiacum Variegatum	Biofuel	15
8	Belly Flower Plant	Jasminum Sombac	infections	7
9	Rose	Rosaceae	Anxiety	15
10	Lemon	Citrus Limon	Anti-cancer Anti-Oxidant	10

Green coverage at Main Gate Area at Sakchi campus

Plantation and Garden in the Sakchi Campus

Green Coverage at Mango Campus




Green Coverage and Garden at Sundernagar Campus

3.2.13 Use of Bicycles:

At KARIM CITY COLLEGE The students and non- teaching staff in and around the campus commute to college by bicycles. The college has constructed a cycle shed to safeguard their vehicles. This transport pooling is a greening initiative by college to avoid environmental pollution and reduce Carbon foot printing Levels. The pathways in college are laid with provision paver block for rainwater to seep through easily. This enables the easy recharge of ground water.

3.2.14 E - communication

All the Departments of the college, Examination cell, and laboratories are very well connected with a good and efficient LAN network. Hence all the inter office correspondence is done through email. This reduces the usage of papers. The e-governance is implemented. Institution implements e-governance covering following areas of operation. With the collaboration of Master Soft in 2021-2022 session.

Particulars(e-governance)	Year of implementation
Administration	2018
Finance and accounts	
Student Admission and support	
Examination	

4.0 Conclusion

This audit involved discussions, questionnaire with all the teams, interactions with key personnel on wider range of issues related to Environmental aspects. The college is considering the environmental impacts of most of its actions and makes an intensive effort to act in an environmentally responsible manner.
Some of findings are –

- LED lights/tubes are fitted in class rooms/lecture halls and many strategic locations.
- Solid waste being segregated and collected at Recycle station and accordingly recycling/disposal being done.
- Rain water harvesting system is at main administrative buildings.
- Generators are fitted with acoustic chambers.
- Good greenery and land scaping done inside campus.

Few things that are important to initiate includes checking of water flow of taps and installation of water meters. We also highly recommend for water audit/balancing. Reuse of treated water for gardening is recommended.

5.0 Recommendations

- There is a need for monitoring and controlling overflow and periodically supervision drills should be arranged.
- KARIM CITY COLLEGE that all cleaning products used by staff have a minimal detrimental impact on the environment.
- Provision of installation of biogas unit should be introduced where the biodegradable wastes and food waste should be used. Further various waste recycling plans for different types of waste should be introduced.

- Paper waste like answer sheets, old bills, and confidential reports should be sent for shredding, pulping, and recycling after completion of their preservation period.
- The management should support more for renewable and carbon-neutral electricity options on any energy- purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.
- More LED lights should be installed to reduce power for lighting.
- The campus administration should run switch–off drill on regular basis.
- In campus premises electricity should be shut down from main building supply after occupancy time, to prevent power loss due to eddy current.
- 5–star rated Air Conditioners, Fans and CFLs should be used.
- Cleaning of tube-lights/bulbs to be done periodically, to remove dust over it.
- Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records.
- Indoor plantation to inculcate interest in students, Bonsai can be planted in corridor to bond a relation with nature.

6.0 References:

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- Energy Conservation Act 2010.
- The Water [Prevention & Control of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- Relevant Indian Standard Code practices

7.0 Transparency of Green Audit Report

Green audit report is one of the useful means of demonstrating an organization's commitment to openness and transparency. The Organisation believes it has nothing to hide from its stakeholders.

KARIM CITY COLLEGE

JAMSHEDPUR, JHARKHAND

KARIM CITY COLLEGE
Jamshedpur, Jharkhand (INDIA)

ENERGY AUDIT REPORT 2022

KORU
FOUNDATION

KORU FOUNDATION

JAMSHEDPUR

KORU
FOUNDATION

CERTIFICATE

PRESENTED TO

KARIM CITY COLLEGE

Sakchi, Jamshedpur, Jharkhand 831001

Has been assessed by KORU FOUNDATION for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory,

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

SIGNATURE

03/05/2022 - 18/05/2022

Date of Audit

KORU FOUNDATION, H.NO 38605, HILL VIEW COLONY, DIMNA

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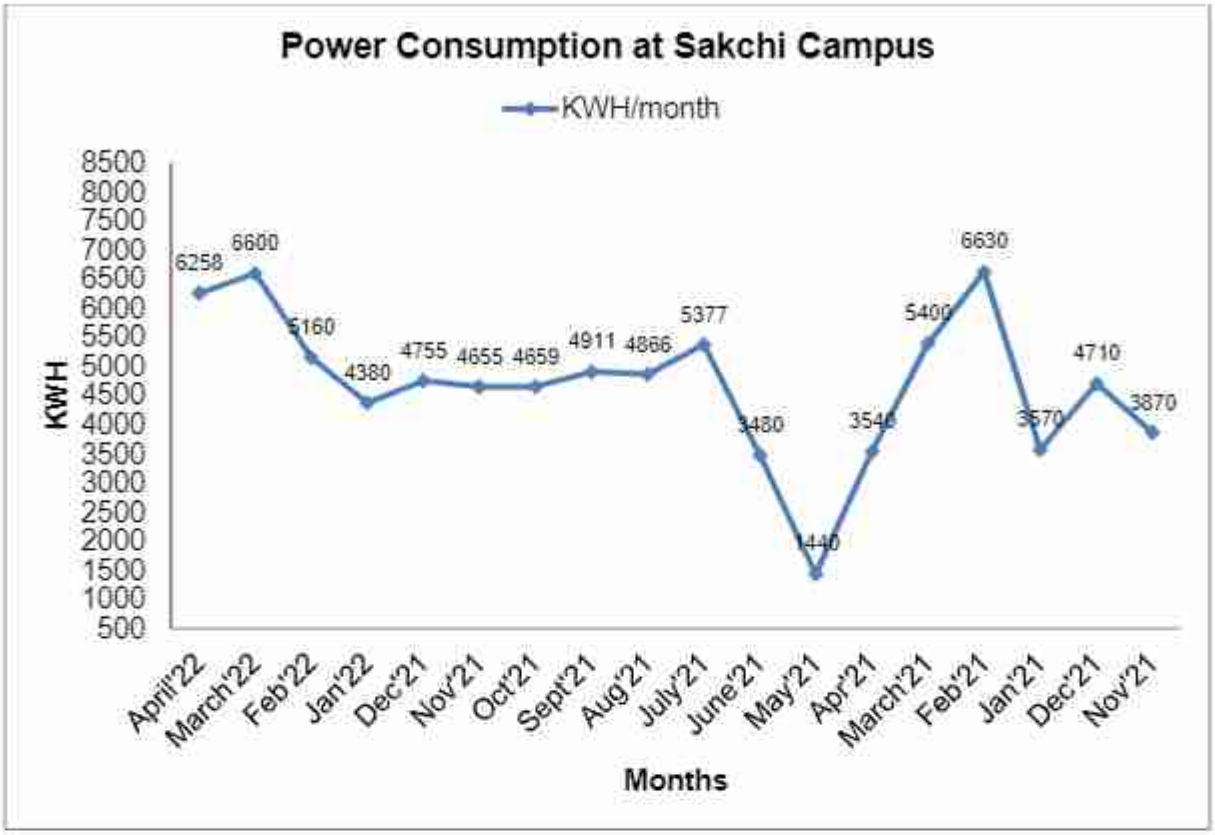
Sakchi Campus

Mango Campus

Energy Audit

This indicator addresses energy KARIM CITY COLLEGE, energy sources, energy monitoring, lighting, appliance, natural resources. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

Monthly average energy consumption of KARIM CITY COLLEGE 4681 KWh/month.



Power generation by Generator at Sakchi Campus:

60 KVA Mahindra (1No.)

Power generation by Generator at Mango Campus:

125 KVA Mahindra (1No.)

LED in gallary

DG Set

LED lights lecture room at Sakchi Campus


Sharda
Sharda Diesels Pvt. Ltd., Ranchi
This Product confirms to the Environment (Protection) Rules, 1986
po erol

DG set and power supply system. LED lights fitted in class room and Computer lab. at Mango Campus

Table – Electrical Equipments at College.

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			led Tube	led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/ Sound System	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split AC	Cleaning Mc	Cooler	Water Dispenser	Water Filter	Bio Matric	Induction Cooker	Elect Kettl	Xerox Mc	Motor Pump 1.5 HP	D.G Set 100Kva	Lab Equipment	Computer /UPS	Printer/Scanner	Networking System	Refrigerator	Microwave	CCTV Monitor	T o t a l
GROUND FLOOR																																		
1	East Side	Main Entrance	5		11	2		1	5				1																					23
2		Section Office	8									3			1				1				1	1				2	1		1	1		20
3		Principal Chamber	1			0					1	1	1			1																	2	15
4		CKMS Computer Lab			5							1																14						20
5		CKMS Computer Lab			8							2																10						20
6		CKMS Head Mistress	4			0						3				1						1												17
7		CK Plus 2			6							2	1																					9

		Library																																				
8		CKMS Staff Room	2		2								2																									6
9		CKHS Science Lab			11								2	1																								14
10		Kitchen	1																				1															2
11	west side-1	Accounts	14										5	3					1			2			1				5	4							35
12		Admin	17										6	1					1										10	6							41
13		CKHS Headmaster		14	7								1	1			1												2	2			2				30
14		Class Room 1 to 3			18								6																								24
15	north side	Library			31								11												1				4	2							49
16		Virtual Library			5	1							3	1															14								24
17		Staff Toilet-M	5		5											2																					10
18	west side-2	Faculty Study	6								1	1	5	2			2			1	1		1						1								24
19		Reading Room	10										3																1								19
20		Staff Toilet-F	4													1																					5
21		IQAC	6								1		2				1												2	2							13
22		Help Desk - Back Side				8								1															1								8
23		Back Side Gate		7	1		4	1																	3												16
24		Canteen			9								6	4		2																					21
25	south side	Student Toilet	1		3											1																					5
26		Boy's Common Room			16						1		3						1																		26
27		Examination Dept			11								6	2			1								1				5	2							26
28		Pantry			5								1										1														5
29		DG Room			6								1													1											7
30		Front Side Corridor	16						3				1																								23
31		4 Sides Corridor	2		22		2		3				2	1				1		1																	32

		TOTAL	107	21	177	26	6	2	11	3	2	83	20	0	7	7	1	3	3	1	2	4	1	4	3	1	0	99	15	0	1	1	4	595
Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			Led Tube	Led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV/Sound System	Projector	Ceiling Fan	wall Fan	Stand Fan	Exhaust Fan	Split Ac	Window Ac	Cooler	Water Dispenser	Water Filter	Bio Matric	Induction Cooker	Bed Light	Xerox Mc	Motor Pump	D.G. Set	Lab Equipment	Computer /UPS	Printer/Scanner	Networking System	Refrigrator	Microwave	CCTV Monitor	TOTAL
15 T FLOOR																																		
1	East side	Commerce Dept	7			12						2			1													2	3					27
2		Room No-9	1		8						1	3																						15
3		Room No-8	2		8							3																						13
4		Staff Room	1		4	10			2			2																1						23
5		Room No-7	2		8							3																						13
6		Room No-6	2		8							3																						13
7		Math Dept	6			7						4	1															10	1					29
8	west side-1	Room No-10	2		12							5																						19
9		Room No-11			10							3																						13
10		Room No-4	3		7							3																						13
11		Room No-5	3		7							3																						13
12		PG Psychology Dept			8						1	3															4	1						15
13	North side	NCC Room	2		2							2																1						7
14		Room No-12			8							6																						14
15		Room No-13			8							5																						14
16		Prayer Room			4							2																						8
17		Toilet			4										1																			5
18	west side-2	Green Studio	10				6			1		5				2												2	2					28
19		IT Class-1	8									4				1																		13
20		Reading Room			12							4																						16
21		Shooting Studio	12			4	14			1	1	2	4			2												1	1					42

22		Mass Comm Office	4	1								2			1	1												2	1					12
23	South Side	IGNOU	6	3		6						4				1												1	1					22
24		Room No-15	8								1	6																						15
25		Room No-16	2		5							4																						11
26		Room No-17	1		10							4																						15
27		NSS			4							1																						5
28		Front Side Corridor	6		11																													16
29		4 Sides Corridor	1		17																													18
		TOTAL	86	4	165	42	20	0	2	2	4	89	7	0	2	8	0	0	0	0	0	0	0	0	0	0	4	21	5	0	0	0	0	465

Sl.No	Direction	LOCATION	1 led Tube	2 led Bulb	3 Conventional Tube	4 Led Panel	5 Led Halogen	6 Digital Notice Board	7 Glow Display Board	8 TV sound System	9 Projector	10 Ceiling Fan	11 Wall Fan	12 Stand Fan	13 Exhaust Fan	14 Split AC	15 Window AC	16 Cooler	17 Water Dispenser	18 Water Filter	19 Bio Metric	20 Induction Cooker	21 Elect Kettel	22 Xerox M/c	23 Motor Pump	24 D.G Set	25 Lab Equipment	26 Computer /UPS	27 Printer/scanner	28 Networking Switch	29 Refrigerator	30 Microwave	31 CCTV Monitor	32 TOTAL
2ND FLOOR																																		
1	East Side	Botany Lab			20						1	10			1												5	1	1		1			44
2		UG Psychology Dept	4		4							4																1	1					14
3		Science Staff Room				4				1		1				1			1				1											9
4		Chemistry Lab	2	6	23							15			4												28	2	2		1			83
5		Chemistry Store Room			2							1																1	1					5
6	West Side-I	Zoology Lab		5	18							11																2	1		2			43
7		Geography Store Room			2								1																					3
8		Geography			11						1	5	1														4	1	1					24

		Lab																																
9		Physic Lab			15						1	11																20	3	1					55
10		Add on Office			3							2				1													2						8
11		Room No-18			8						1	6																							15
12	North side	Room No-19	1		5							4																							10
13		E Class-2			12						1	4				1													1						13
14		Toilet Student			2										1																				3
15		Dip in Guidance Cons	7	1						4	1	6				1													2	1					23
16	West Side-2	Room No-22	1		14							8																							23
17		Room No-23	1		10							6																							17
18		PG-Urdu Dept			4							2				1													1						8
19		PG English Dept	5									2				1													1						9
20	South Side	Girls Common Room	1		10					1		8			3																				23
21		Room No-24	2		10							10			5																				27
22		CK Plus 2 Office			2							1	1																						4
23		Front Side Corridor	3		7																														10
24		4 Sides Corridor			16														1																17
25		3 Staircase			14																														14
																																			0
		TOTAL	27	16	216	4	0	0	0	5	6	117	3	0	14	6	0	0	2	0	0	0	1	0	0	0	61	18	5	0	4	0	0	510

Sl No	Direction	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			led Tube	led Bulb	Conventional Tube	Led Panel	Led Halogen	Digital Notice Board	Glow Display Board	TV Sound System	Projector	Ceiling Fan	Wall Fan	Stand Fan	Exhaust Fan	Split AC	Window AC	Cooler	Water Dispenser	Water Filter	Bio Metric	Induction Cooler	Elect Kettel	Xerox Mc	Motor Pump	D.G Set	Lab Equipment	Computer /UPS	Printer/Scanner	Networking Switch	Refrigerator	Microwave	CCTV Monitor	TOTAL

3rd FLOOR																																				
1	North side	3 Side a Corridor			15														1																	16
2		Toilet Student			2										1																					3
3		Room No-25			6							4																								10
4		Room No-26			6							4																								10
5		BSC -IT Lab			8						1	5				3															25					43
6		BSC -IT Office			4											1															2	2				9
7		Language Lab			4	12						6				2															22					46
8	South side	PG-Application				12					1	6				3															12	1				35
9		Room No-27			4							4																								8
10		Room No-28			4							4																								8
11		CA Lab			8							5				3															25					42
12		Excel Programme			6							2																			1	1				10
13		Toilet	1		1																															2
		TOTAL	1	0	68	24	0	0	0	0	2	42	0	0	1	12	0	0	1	0	0	0	0	0	0	0	0	87	4	0	0	0	0	242

TOTAL G+1+2+3	2 3 3	4 1	2 2 4	6 6	2 6	2	1 3	1 1	1 4	3 3 7	0 0	0	2 4	0 5	1	1 3	1	1	2	4	2	4	1	1	0 5	1 6 5	4 1	0	5	1	4	1 6 1 2

i. Power Consumption at Manago campus:

Sl No	Month	KWh	Rs. Paid
1	April'2021	1107	15096
2	Sept'2021	2277	71132
3	Oct'2021	4188	33962
4	Nov'2021	2849	60645

5	Jan'2022	2184	12384
6	Feb'2022	1399	17450

Electrical equipment at Mango campus.

Sl No	Equipment	Watt	Quantity
1	Fan	75	183
2	LED Tube lights	18	125
3	General Tube lights	36	175
4	Air Conditioners	1.05 T	9
5	Computer	140-150	63
6	Water cooler	1200	01

ii. Alternate sources of Energy and Energy Conservation- Solar Energy

Presently study of solar energy capability being study going on. Based on the capability with respect to space available solar energy system will be installed.

iii. Conclusion

This audit involved discussions, questionnaire with all the teams, interactions with key personnel on wider range of issues related to energy. The college is considering the environmental impacts of most of its actions and makes an intensive effort to act in an environmentally responsible manner.
Some of findings are –

- LED lights/tubes are fitted in class rooms/lecture halls and many strategic locations.

iv. Recommendations

- The management should support more for renewable and carbon-neutral electricity options on any energy- purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.
- More LED lights should be installed to reduce power for lighting.
- The campus administration should run switch–off drill on regular basis.

- In campus premises electricity should be shut down from main building supply after occupancy time, to prevent power loss due to eddy current.
- 5–star rated Air Conditioners, Fans and CFLs should be used.
- Cleaning of tube-lights/bulbs to be done periodically, to remove dust over it.