



Quality audits on environment and energy regularly undertaken by the Institution and any awards received for such green campus initiatives:-

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Aruchana
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Date.: 14/05/2023

GREEN INITIATIVES AWARD

This Green Initiatives Award recognizes King George's Medical University's unwavering commitment to environmental sustainability. Through innovative practices, energy conservation, waste reduction, and active promotion of eco-friendly habits, the institution has set a benchmark in creating a greener, cleaner, and more sustainable future. This award celebrates their role as a responsible steward of the environment and a leader in green transformation.

Abdullah Siddiqui
President

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पंजीकृत संख्या : R/LUC/04335/2022-2023
PAN No. AAATH5652D



हरिओम सेवा केन्द्र

नर सेवा - नारायण सेवा

पर पीड़ा से छलक उठे मन, यह छलकन ही गंगाजल है।
दुख हरने को हुलस उठे मन, यह हुलसन ही तुलसी दल है॥

किंग जार्ज चिकित्सा विश्वविद्यालय, लखनऊ में भर्ती निःसहाय, निर्धन, लावारिस एवं आकस्मिक दुर्घटनाग्रस्त रोगियों की निःशुल्क सेवा हेतु समर्पित संस्था।

नीरोबीबी विश्राम सदन, सुगाय मार्ग, लखनऊ सम्पर्क : 9956660057, 9119646746

संदर्भ संख्या: General/24-25/147A

दिनांक: 05/06/2024

CERTIFICATE OF RECOGNITION

Green Initiative Excellence Award

Presented To: King George's Medical University (KGMU), Lucknow

In recognition of your outstanding commitment to environmental sustainability, eco-friendly practices, and green initiatives, Hari Om Seva Kendra proudly confers upon KGMU the Green Initiative Excellence Award.

Your efforts in promoting waste management, energy conservation, green campus development, and awareness programs align with global sustainability goals and inspire others to adopt eco-conscious practices.

This certificate honors your dedication to creating a healthier, greener future and serves as a testament to your institution's leadership in environmental stewardship.

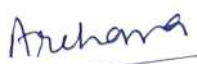
Awarded on: 05 June, 2024.


Authorized signatory

हरि ओम सेवा केन्द्र
नीरोबीबी विश्राम सदन
सुगाय मार्ग, लखनऊ
सम्पर्क : 9956660057, 9119646746

(80G) आचक्र अधिनियम 1961 की धारा 80G/5 के तहत मान्यता प्राप्त नं० 58-59/36/7/2006-2007

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KING GEORGE'S MEDICAL UNIVERSITY U.P., LUCKNOW

GREEN AUDIT REPORT

OF

KINGGEORGE'SMEDICALUNIVERSITY

SHAHMINARD,CHOWK, LUCKNOW, UTTARPRADESH(226003)



INGENYRIA PROJECTS PVT LTD

ISSUED BY DELHI/NCROFFICE



(Prof. Mohd. Parvez Khan)
Core Committee Member
University Environment Department
K.G.M.U. U.P., Lucknow

Registrar
King George Medical University
Lucknow

	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow, UP	Medical College	NA	17.09.2022	

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ACKNOWLEDGEMENT

Ingenyria Projects Pvt.Ltd .expresses its sincere thanks to

- Dr.KirtiSrivastava,ProfessorDepartmentofRadiotherapy,MemberSecretary Environment Committee.
- Dr.Mohd.Parwez,HeadoftheUniversityEnvironmentDepartment
- Er.BirendraKumarDubey,AE,PWD,Electrical
- Er.BablooSingh,AE,PWD,Mechanical

And King George's Medical University, Lucknow, Uttar Pradeshmanagement for the wholehearted cooperationin successful completionof the studyand for the courtesy and support extended to our team during the project execution.

We alsogratelyacknowledge their advice, suggestion and cooperation provided tous by other supporting staff in obtaining required data from different sources.

Arunima
 Registrar
 King George Medical University
 Lucknow

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CERTIFICATE

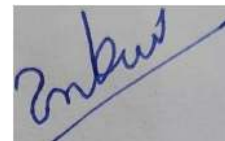
This is to certify that we have conducted the detailed “Green Audit” of King George’s Medical University Campus (KGMU), Lucknow (UP) on dated 16th & 17th Sept, 2022. During the green audit we carried out the detailed analysis of the KGMU campus for its initiatives on the environment sustainability and consistency. During this audit, we have evaluated the entire campus on 15 different parameters of environment sustainability as:

- Water Management System
- Waste Water Treatment
- Green spaces in the campus and their status
- Waste Segregation
- Bio Medical Waste (BMW) management
- General Waste Management
- Plastic Waste Management.
- Air, noise & water quality monitoring.
- Action log on the reduction of the plastic.
- Energy Efficiency & targets.
- Green energy & its adoption.
- Reduction in the carbon footprints.
- Green initiatives in the local contexts.
- Training & Communication.
- Awareness among the masses.

During this green audit, we found that the KGMU team of subject matter specialists is working towards the environment system sustainability. The awareness about the green spaces has enhanced and the team is able to connect this with **Swatch Bharat Abhiyaan**. KGMU campus has also developed the plan to enhance the green spaces by awareness, geo-tagging of the trees & other technological upgradation.

Date: 01.10.2022

Place: Delhi



Auth. Signature

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1. INTRODUCTION

1.1. ABOUTCOLLEGE

King George's Medical University is a medical school, hospital, and medical university located in Lucknow, Uttar Pradesh, India. The medical school was raised to a medical university by an act passed by the government of Uttar Pradesh on 16 September 2002. The University has about 1250 undergraduate students (including 280 dental students) and 450 postgraduate students. About 250 students a year are admitted to the four-and-a-half-year course of study for the degree of M.B.B.S.

FACULTIES AND INSTITUTES

- Faculty of Medical Sciences
- Faculty of Dental Sciences
- Institute of Paramedical Sciences
- Institute of Nursing

COURSES & UG PROGRAMME

- MBBS
- BDS, MDS
- MD/MS
- PG Diploma Courses
- Diploma in Psychiatric/Mental Health Nursing
- Diploma Dental Hygienist, Diploma Dental Mechanics
- Super Speciality Courses (DM/MCh)
- M.Phil. in Translational Health Science
- B.Sc. Nursing

1.2. GEOGRAPHICAL PARAMETERS

King George's Medical University (KGMU hereafter) is situated in the heart of the historic city of Lucknow which is the capital of India's most populous state Uttar Pradesh. Lucknow lies about 500 km east of Delhi. The city was the seat of the Nawabs of Awadh in the 19th century and a centre for the arts - music, painting, dance, 'shatranj' or chess, kite flying and 'tehzeeb' or culture. The university campus adjoins the crowded 'Chowk' area and is off Shahmina Road, very close to the bank of River Gomti.

The university campus is spread over an area of roughly 100,000 square metres. It is situated about 5 km from Charbagh Railway Station and is well connected to all parts of the city by public transport systems such as bus, tempo and taxi.

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ThecoveredareadetailsoftheKGMUniversityareasfollows;

S.No.	Description	Area(m ²)(Approximate)
1.	LandArea	649999.20Squaremeter(160.6183 Acre)
2.	Groundcoverage/PlinthArea	151011.86Squaremeter
3.	Built-upArea(floorwise)	498059.68Squaremeter



Imagesource:https://www.kgmu.org/campus_map.php

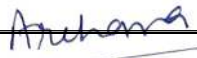
Intheabovemap,thedepartments,buildingandareaslistedbelowaremarked.

Hospital/ClinicalDepartments	Hostels/GuestHouses
OPDBuilding	Residentquarters
Urology	CVHostel
Tuberculosis&ChestDiseases	OldBoys'AssociationGuestHouse
DentalUniversityBuilding	VLHostel(New)
MainHospitalBuildingwithSuperintendent/Pro	NursesHostel
FractureClinic	VLHostel(Old)

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PrivateWards/ParaplegiaUnit	VLHostel(Ultra New)
Internalmedicine	NehruHostel(old&new)
Neurology	Residents'Hostel
DialysisUnit	UniversityGuestHouse
NewSurgicalBlock	SardarPatel Hostel
GeriatricMentalHealth	LadyResidents'Hostel
Cardiology	TransGomtiHostel
DentalHospital(New)	Miscellaneous
QueenMary's Hospital	ShahminaTomb&Mosque
Anaesthesia	Kitchen
PlasticSurgery	Store
Neurosurgery	WorksDepartmentsOffice
NewPaediatricSurgery&SurgicalOncology	Mortuary
Block(underconstruction)	Toilets
Ophthalmology	UndergroundParkingLot
Paediatrics	College/NonclinicalDepartments
Paediatrics(extn)	Pharmacology
ForensicMedicine	Centrallibrary
NewDentalUniversityBuilding	Anatomy
Psychiatry	AdministrativeBlockwithKGMCI
CTScanandMRI	BloodBank
NewOphthalmicBlock	Pathology/ Microbiology


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CentenaryHospitalComplex	Physiology/ Biochemistry
CTScanUnit	CommunityMedicine
Residences&Bungalows	ScientificConventionCentre
DoctorsResidences	NewRegistrar&FinanceOffice
Sister'sResidence	Casualty
StaffQuarters	NewCasualty(SurgicalEmergencyandTrauma Centre)
NewVCResidence	
OutHouses	

1.3. VISION,MISSION&OBJECTIVEOFTHECOLLEGE¹

Vision

- Tobe anoutstandingUniversityofMedicalExcellenceinthe worldineducation,research and patient care.

Mission

- To become one of the world's best providers of high-quality teaching and excellence in education
- Generate outstanding leaders in health sciences
- Promote multidisciplinary scientific biomedical research
- Provide compassionate, patient-centred care of the highest quality

Objectives:

- To effectively implement programs through creativity, innovation in teaching, learning and evaluation.
- Inculcate communication skills and scientific temperament among faculty and students through research-oriented activities.
- Enhance competency through knowledge and skills, reading and learning activities, continuous objective oriented student performance evaluation.
- Nurture professionalism and behavioural skills in medical professionals.

¹Source: <https://www.kgmu.org/mission.php>

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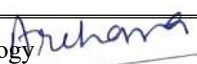
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- Incorporatemedicalethics,moralvalues,teamspirit,responsibilitiesandsenseofintegrity in medical faculty and students.
- Ensureacademic,careerandpersonalcounselling.
- Collectpatient-orientedevidencethatmatters.
- Adopttransparencyandaccountabilityinacademicandadministrativeactivities.
- Develop,designandimplementinnovativeandtranslationalscientificdiscoveries.
- Discover,understandandimprovethehealthofpopulations,communitiesandsocieties.

1.4. CAMPUS INFORMATION

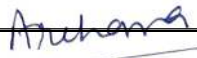
ListofdepartmentsattheKGMUniversitycampusisasfollows;

DEPARTMENTS OF KGMU-LUCKNOW	
AnaesthesiologyandCriticalCare	OralPathology
Anatomy	Oral&MaxillofacialSurgery
Biochemistry	OralMedicine&Radiology
Cardiology	Orthodontics&DentofacialOrthopaedics
Cardiovascular&ThoracicSurgery	OrthopaedicSurgery
CentreforAdvancedResearch(CFAR)	Otorhinolaryngology&HeadNeckSurgery
ClinicalHaematology	PaediatricandPreventiveDentistry
ClinicalImmunologyandRheumatology	PaediatricAnaesthesia
CommunityMedicine	PaediatricOncology
ConservativeDentistry&Endodontics	PaediatricOrthopaedics
CriticalCareMedicine	Pathology
Dermatology,Venereology&Leprosy	PaediatricSurgery
EmergencyMedicine	Paediatrics
EndocrineSurgery	Periodontology


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DEPARTMENTS OF KGMU-LUCKNOW	
Family Medicine	Pharmacology
Forensic Medicine & Toxicology	Physical Medicine & Rehabilitation
Geriatric Mental Health	Physiology
Guest Faculty	Plastic & Reconstructive Surgery
Hospital Administration	Prosthodontics
Medical Education	Psychiatry
Medical Endocrinology	Public Health Dentistry
Medical Gastroenterology	Pulmonary & Critical Care Medicine
Medical Oncology	Radiodiagnosis
Medicine	Radiotherapy
Microbiology	Respiratory Medicine
Nephrology	Sports Medicine / Sports Injury
Neuro Anaesthesia	Surgery
Neuro Surgery	Surgical Gastroenterology
Neurology	Surgical Oncology
Nuclear Medicine	Thoracic Surgery
Nursing	Transfusion Medicine
Obstetrics & Gynaecology	Transplantation
Ophthalmology	Trauma Surgery


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DEPARTMENT OF KGMU-LUCKNOW	
Vascular Surgery	Urology

2. BASIC OF GREEN AUDIT

2.1. OBJECTIVES OF GREEN AUDIT

The main objectives of the green audit are to assess the environmental quality and the management strategies being implemented in KGMU Campus, Lucknow, Uttar Pradesh. The specific objectives are:

- To assess the quality of the water and soil in the KGMU campus.
- To monitor the energy consumption pattern of the campus.
- To quantify the liquid and solid waste generation and management plans in the campus.
- To assess the carbon footprint of the campus.
- To assess whether the measures implemented by KGMU have helped to reduce the Carbon Footprint.
- To impart environment management plans to the campus.
- Providing a database for corrective actions and future plans.
- To assess whether the extracurricular activities of the Institutions support the collection, recovery, reuse and recycling of solid wastes.
- To identify the gap areas and suggest recommendations to improve the Green Campus status of the KGMU Campus.

2.2. TARGET AREAS OF GREEN AUDITING

Green audit forms part of a resource management process. Although they are individual events, the real value of green audit is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. Eco-campus concept mainly focuses on the efficient use of energy and water; minimize waste generation or pollution and also economic efficiency. All these indicators are assessed in the process of "Green Auditing of this educational institute". Eco-campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the institute's energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all contracts and services considered to have significant environmental impacts. Target areas included in this green auditing are water, energy, waste, green campus and carbon footprint.

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2.3. METHODOLOGY ADOPTED

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

- Onsite Visit of two-day was conducted by the Green Audit Team. The key focus of the visit was on assessing the status of the green cover of the Institution, their waste management practices and energy conservation strategies etc.
- Data analysis and report preparation.

2.4. GREEN AUDIT TEAM

The audit team from Ingenyria Project Pvt. Ltd. Was;

- Mr. Ankush Prashar (Lead auditor)
- Mr. Shishpal Negi

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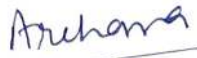
3. EXECUTIVESUMMARY

This report is an attempt ofIngenyria Projects Pvt. Ltd. to provide an overview of the water management system, waste management system, energy management system, carbon footprint oftheKGMuniversityandair,noiseandwaterqualityagainstgreenauditatKingGeorge'sMedical University, Lucknow, Uttar Pradesh. A set of recommendations which will assist in achieving the green campus has also been highlighted in this report. This report has emerged after a detailed green audit conducted in King George's Medical University, Lucknow, Uttar Pradesh on 16thSeptember & 17thSeptember 2022.

At KGM university, there is scope for further improvement, particularly in relation to waste water management, energy and water management. Also, action needs to be taken for monitoring air, noise and water quality at the university premise. The suggestions are as follows;

- KGMU shall install digital water flow meter at each borewell at the university and hostel campus to calculate the daily water consumption of the university. Along with this, it is recommendedtoinstall piezometerstomonitorthegroundwaterlevel,onepiezometerat university campus would be sufficient.
- During the audit, 6636 KLD (approx.) of daily water consumption has been calculated on the basis of running hour and discharge capacity of the pump. It is recommended to conductadetailwaterauditforthefacilityasthewaterconsumptionisonhighersideand stepsshallbetakentoreducethewaterconsumptionattheuniversity.Also,itissuggested to measure the annual recharge potential through rain water harvesting structures.

S. N.	Locations	NumberofPumps	Running Hours	LPM	KLD	Remarks
1	University Campus	3	24	800	3456	
2		9	7	800	3024	
3		Dailyconsumption(kL)			6480	(A)
4		Annuallyconsumption(kL)			2365200	(C)
5	Hostelsat KGMU	26	5	20	156	(B)
6		Dailyconsumption(kL)			156	(D)
7		Annualconsumption(kL)			56940	
Dailyconsumption(Universitycampus&hostel)(kL)					6636	(E=A+B)


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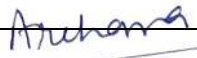
S. N.	Locations	NumberofPumps	Running Hours	LPM	KLD	Remarks
Annualconsumption(Universitycampus&hostel)(kL)					23,65,356	(F=C+D)

- Total 1370 KW of rooftop solar panels is installed at the university; which is 10% of the total power demand of the university. KGMU shall take steps to increase the solar power (renewablepowersources)toachievementsageof maximum green energyfortheuniversity campus. This would help to reduce the consumption of the diesel at the site and thus will reduce the carbon emission.

Sr. No.	Sourceofenergy	Capacity/Demand
1	StateElectricityBoard(thermalSource)	13.27MW
2	RooftopSolar(renewablesources)	1370KW
3	DGSet(forpowerBack-up)	8713KVA (Approx.)

- Petrolanddieseloperatedvehiclesarebeingusedattheuniversitycampusforcommuting fromoneareatoother.KGMUniversitycantakesomestepstointroducetheelectriccars or e-rikshaws at the university premise to reduce the carbon footprints of the university.

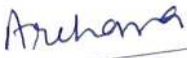
Items	Units /Year	Quantity	Emission Factor	kg of CO ₂ -e	Remarks
Electricity Consumption	kWh	26282700	0.85	22340295	Fromenergyauditreport
Petrol	Liters	250000	2.296	574000	Approx.(considering2000 cars in a day in university campus)
Diesel	Liters	40610	2.653	107738.3	Fromenergyauditreport
LPG	kg	168891	2.983	503801.9	Fromenergyauditreport
CarbonFootprint (t CO₂-e)	23525.84				


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- KGM university shall develop a system for monitoring the air and noise pollution at the university and these parameters shall be monitored daily at the university campus.
- The waste water of the entire university shall be treated. For this purpose, only one STP unit of 500 KLD is installed at the university campus. However, university is working on the other STP units.
- M/s Synergy Waste Management (P) Ltd. is handling the waste of the KGM University. The total maximum quantity permitted to the vendor is 1103.36 kg/day of yellow type of waste, 68.18 kg/day of red type of waste and 12.17 kg/day of white type of waste. However, as per the record, the average waste generated in year 2019 was 325.45 kg of yellow waste per day and 663.48 kg of red waste per day. In year 2020; 329.23 kg of yellow waste per day and 458.83 kg of red waste per day was generated. In year 2021; 414.26 kg of yellow waste per day and 568.23 kg of red waste per day was generated. Hence, it is recommended to review the daily quantity of the waste permitted for handling to the vendor and action shall be taken accordingly. The table is shown below.

Type of waste	Permitted waste quantity per day (kg/day)	Waste generated in year 2019 (kg/day)(average)	Waste generated in year 2020 (kg/day)(average)	Waste generated in year 2021 (kg/day)(average)
Red Waste	68.18	663.48	458.83	568.23
Yellow Waste	1103.36	325.45	329.29	414.26
White Waste	12.17	No data	No data	No Data
Total Waste	1183.71			


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4. GREENAUDITOBSERVATIONS

During the green audit, we carried out the detailed analysis of the KGM University campus for its initiatives on the environment sustainability and consistency. During this audit, we have evaluated the entire campus on the following parameters;

- WaterManagementSystem
- WasteManagementSystem(Bio-medical,GeneralandHazardousWaste)
- Greenspacesinthecampusandgreeninitiatives.
- Air,Noise&Waterqualitymonitoringsystem.
- EnergyManagementSystemwithgreenenergyadoptiontechniques.
- Analysisofcarbonfootprints
- Training,Communicationandawarenessamongthemasses.

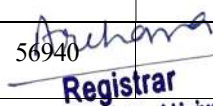
The detail of the following parameters are explained below;

4.1. WATERMANAGEMENTSYSTEM

At KGM University, the source of water supply is only borewells. As per the data available, there are fourteen (14) borewells at the university campus servicing the water demand of the university and for hostels, approx. 25 to 26 borewells are installed. Other than this, some of the borewells at the university campus are not in working condition.

Water flow meters are not installed at any of the pumps installed at the bore-wells. Thus, the consumption of the water cannot be assured during the audit. However, the same has been calculated with the running hour and LPM of the pump. The calculations are as follows;

S. N.	Locations	Number of Pumps	Running Hours	LPM	KLD	Remarks
1	University Campus	3	24	800	3456	
2		9	7	800	3024	
3		Daily consumption (kL)			6480	(A)
4		Annually consumption (kL)			2365200	(C)
5	Hostels at KGMU	26	5	20	156	(B)
6		Daily consumption (kL)			156	(D)
7		Annual consumption (kL)			56940	


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S. N.	Locations	NumberofPumps	Running Hours	LPM	KLD	Remarks
Dailyconsumption(Universitycampus&hostel)(kL)					6636	(E=A+B)
Annualconsumption(Universitycampus&hostel)(kL)					23,65,356	(F=C+D)

The detailsoftheworkingborewellsfortheuniversitycampusaretabulatedbelow;

S.N.	RESOURCE	AREA	QUANTITY
1	TUBEWELL	HOSTEL	2
2	TUBEWELL	BUDDHAHOSTEL	1
3	TUBEWELL	FACULTYAWAAS	1
4	TUBEWELL	BRIDDHAMAANSIK	1
5	TUBEWELL	CTBS(HEART)	1
6	TUBEWELL	SHATABDIPHASE1	1
7	TUBEWELL	SHATABDIPHASE2	1
8	TUBEWELL	BACKSIDEOFSHATABDIPHASE2	1
9	TUBEWELL	NEW OPD	1
10	TUBEWELL	TRAUMA	1
11	TUBEWELL	MEDICALGANDHIWARD	1
12	TUBEWELL	REGISTRAR	1
13	TUBEWELL	RLC	1

4.1.1. RAINWATERHARVESTING

The concept of rain water harvesting is an ancient one and has become popular in recent times because of the vagaries of the monsoon, depleting water resources, its user friendliness. It has become an important and eco-friendly tool to protect groundwater, useful and cost-effective.

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method to boost water resources in any area. Rainwater harvesting is the technique of collection and storage of rainwater at surface or in sub-surface aquifers, before it is lost as surface run-off.

The detailsof rainwater harvesting in the premise is provided below;

S.N.	RainWaterHarvestingLocations/Areas	Qty(Nos)
1.	Kalamcentre(Teachingblock)	02
2.	NewOPD.	01
3.	ShatabdiHospitalPhase-1	01
4.	ShatabdiHospitalPhase-2	01
5.	Traumacentre	01
6.	Bio-chemistryDepartment	01
7.	PaediatricSurgeryDepartment	01
8.	GautamBuddhaHostel	02
9.	MultistoreyTeachersflatsT.G.campus	01
10.	MultistoreyBoysHostelT.G.campus	01
11.	TransitNursesHostelT.G.campus	04
12.	NewDentalbuilding	01
13.	CentralLibrary	01
14.	FacultyResidencetype-5JagatNarayanroad(Ablock)	01
15.	FacultyResidencetype-5JagatNarayanroad(Bblock)	01
16.	U.G.GirlsHostel	01
17.	P.G.GirlsHostel	01
18.	ForensicMedicineandToxicologyDepartment	01

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S.N.	RainWaterHarvestingLocations/Areas	Qty(Nos)
19.	ETHSC.Banthra	02
20.	ETHSC.Mati	03
21.	TeachersandstaffresidenceinAmrapaliYojna-Hardoiroad	03
22.	CentreforExcellenceforNursing&MidwiferyTraining	01
	TotalnumbersofRainWaterHarvestingtank	32

Someofongoingprojectsfortherainwaterharvestingareasfollows.

S.N.	RainWaterHarvestingLocations/Areas
1.	ExpansionofLariCardiologyDepartment
2.	NewHostelblockinTG.Hostelcampus
3.	CTVS.Department
4.	Spinecentre
5.	300bedHospital,Balrampur

4.2. WASTEMANAGEMENTSYSTEM

KGMUniversityisdoingitswastemanagementinthewastemanagementthroughtheenvironment department. The waste is segregate into solid waste and waste water and several measures has been taken for the waste management by the university.

TheKGMUniversityhasadoptedapolicyofwastesegregatedatthepointofthegeneration.This policy has been implemented at the university with the help of head of departments and nodal officers.

4.2.1. WASTEWATERMANAGEMENT

KGM university has installed a STP unit of 500 kLD for waste water treatment and there are two more STP units are in planning and construction phase.

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4.2.2. SOLID WASTE MANAGEMENT

KGM university has appointed M/s Synergy Waste management (P) Ltd. For collection, storage, reception, treatment and disposal of the biomedical waste. The quantity permitted for handling the waste is as follows.

Type of Waste Category	Quantity Permitted for handling (kg/day)
Yellow	1103.36
Red	68.18
White (translucent) Blue	12.17
Total Weight	1183.70 kg/day

The solid waste of the university has been segregated into the following categories and this is as per the waste segregation policy of the university.

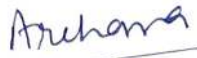
Colour Coding	Type of container	Waste Category	Items	Terminal Disposal
Black	Plastic Bin with poly bag	Non-infected General waste	Municipal wastes such as office waste (like paper waste). Kitchen waste, food waste, disposable glasses & bottles, non-infected plaster casts	Landfill by nagarnigam

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	Green Audit Assessment Report				
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Colour Coding	Type of container	Waste Category	Items	Terminal Disposal
Red	Plastic Bin with poly bag	Infected Plastic/rubber waste	Waste generated from disposable plastic/rubber items (other than sharps) such as tubing's, hand gloves, plastic saline bottles and IV tubes, catheters, intravenous set etc.	Autoclaving & Shredding Recycling By KGMU
Yellow	Plastic Bin with poly bag	Infected Non-Plastic waste	Non-plastic items contaminated with blood and body fluids including cotton, dressings, contaminated plaster casts, linen, beddings, others.	Incineration Ash Deep Burial
Transparent Puncture proof	Puncture-proof containers, no poly bags	All sharps	Needles, scalpel blades, broken ampoules, stellates of venflons, razors, sharp instruments etc	Autoclaving & Shredding Recycling/pit
Blue	Plastic Bucket with Lid	Non-infected Glass	Glass bottles & medication vials (not ampoules)	Disinfected with 10% hypo solution for 0.5 hr.
White	Plastic Bin, no poly bag	Liquid Waste	Sputum, aspirates from body (ascitic fluid, pleural/pericardial effusion, dialysis etc)	Disinfected with 10% hypo solution for 0.5 hr and drain

Amount of Waste Produced at KGMU UP, Lucknow for last three years is as follows;


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	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

AmountofWasteProducedKGMUUP,Lucknow(Period:January,2019toDecember,2019)

S. N.	Month	Total Waste	General Waste	Bio-MedicalWasteinKg								TotalBio-Medical Waste	Paper/ Card-board	Total Wasteof per day per bed (Kg)
				Yellow (Incinerable Waste)	Yellow Waste/ Day	Red (Infected Plastic Waste)	Red Waste/ Day	Sharps	Sharps/ Day	Glass	Glass/ Day			
1	January,2019	1,81,470.70	1,52,803.50	6,350.00	204.84	18,662.70	602.02	134.50	4.34	3,520.00	113.55	28,667.20	1691	1.95
2	February,2019	1,65,602.20	1,38,538.00	5,843.00	208.68	17,853.70	637.63	145.50	5.20	3,222.00	115.07	27,064.20	1776	1.91
3	March,2019	1,84,701.25	1,53,711.00	8,220.00	265.16	19,287.55	622.18	168.70	5.44	3,314.00	106.90	30,990.25	2031	1.99
4	April,2019	1,91,093.05	1,59,915.00	8,585.00	286.17	18,840.75	628.03	117.30	3.91	3,635.00	121.17	31,178.05	1777	2.12
5	May,2019	1,91,349.25	1,61,396.50	8,495.00	274.03	17,638.55	568.99	118.20	3.81	3,701.00	119.39	29,952.75	1545	2.06
6	June,2019	1,91,411.41	1,57,379.00	9,648.00	321.60	19,069.76	635.66	152.56	5.09	5,162.09	172.07	34,032.41	2060	2.07
7	July,2019	2,14,889.06	1,72,654.50	13,919.00	449.00	22,272.03	718.45	222.71	7.18	5,820.82	187.77	42,234.56	2260	2.31
8	August,2019	2,11,574.55	1,70,450.00	12,783.00	412.35	21,407.00	690.55	286.30	9.24	6,648.25	214.46	41,124.55	1966	2.27

	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

S. N.	Month	Total Waste	General Waste	Bio-MedicalWasteinKg								TotalBio-Medical Waste	Paper/ Card-board	Total Wasteof per day per bed (Kg)
				Yellow (Incinerable Waste)	Yellow Waste/ Day	Red (Infected Plastic Waste)	Red Waste/ Day	Sharps	Sharps/ Day	Glass	Glass/ Day			
9	September,20 19	2,15,362.10	1,75,294.50	11,358.00	378.60	22,611.80	753.73	202.55	6.75	5,895.25	196.51	40,067.60	1653	2.33
10	October,2019	2,11,058.80	1,72,120.00	10,900.00	351.61	21,772.55	702.34	259.05	8.36	6,007.20	193.78	38,938.80	1862	2.27
11	November, 2019	2,11,907.20	1,73,262.00	11,358.00	378.60	21,686.15	722.87	268.00	8.93	5,333.05	177.77	38,645.20	1960	2.29
12	December,201 9	2,21,182.90	1,82,569.00	11,619.00	374.81	21,058.60	679.31	254.75	8.22	5,681.55	183.28	38,613.90	1706	2.38

AmountofWasteProducedKGMUUP,Lucknow((Period:January,2020toDecember,2020)

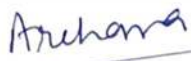
Sn.	Month	Total Waste	General Waste	Bio-MedicalWasteinKg							Glass/Day	Total Bio-MedicalWaste	Paper/ Cardboard	Total Wasteof per day per bed (Kg)
				Yellow (Incinerable Waste)	Yellow Waste/ Day	Red (Infected Plastic Waste)	Red Waste/ Day	Sharps	Sharps/ Day	Glass				
1	January,2020	2,19,568.50	1,78,866.00	13,677.50	441.21	20,948.35	675.75	267.20	8.62	5,809.45	187.40	40,702.50	1840	1.77
2	February,2020	2,02,402.34	1,61,941.00	13,327.35	475.98	21,188.65	756.74	275.69	9.85	5,669.65	202.49	40,461.34	1662	1.74
3	March,2020	1,90,110.84	1,54,437.00	12,096.65	390.21	18,380.85	592.93	212.84	6.87	4,983.50	160.76	35,673.84	1214	1.53
4	April,2020	1,18,346.45	99,763.00	6,983.55	232.79	9,236.40	307.88	125.50	4.18	2,238. 00	74.60	18,583.45	1552	0.99

	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
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	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

Sn.	Month	Total Waste	General Waste	Bio-MedicalWasteinKg							Glass/Day	Total Bio-MedicalWaste	Paper/ Cardboard	Total Wasteof per day per bed (Kg)
				Yellow (Incinerable Waste)	Yellow Waste/ Day	Red (Infected Plastic Waste)	Red Waste/ Day	Sharps	Sharps/ Day	Glass				
5	May,2020	1,12,156.30	93,057.00	8,501.50	274.24	8,278.20	267.04	109.50	3.53	2,210.10	71.29	19,099.30	1171	0.90
6	June,2020	1,39,398.39	1,14,029.00	11,047.57	368.25	11,192.20	373.07	164.72	5.49	2,964.90	98.83	25,369.39	1412	1.13
7	July,2020	1,53,120.95	1,27,836.00	10,964.25	353.69	11,230.30	362.27	119.90	3.87	2,970.50	95.82	25,284.95	1274	1.23
8	August,2020	1,31,514.50	1,11,670.00	9,170.50	295.82	8,448.60	272.54	80.70	2.60	2,144.70	69.18	19,844.50	1015	1.06
9	September, 2020	1,19,637.22	1,01,402.00	7,026.43	234.21	8,739.91	291.33	110.78	3.69	2,358.10	78.60	18,235.22	1217	0.97
10	October,2020	1,25,354.43	99,108.00	8,701.98	280.71	14,368.45	463.50	122.00	3.94	3,054.00	98.52	26,246.43	1345	1.01
11	November, 2020	1,32,861.39	1,04,388.00	8,813.21	293.77	16,043.06	534.77	145.82	4.86	3,471.30	115.71	28,473.39	1167	1.08
12	December, 2020	1,44,917.14	1,12,343.00	9,607.07	309.91	18,854.14	608.20	167.63	5.41	3,945.30	127.27	32,574.14	1197	1.17


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	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

AmountofWasteProducedKGMUUP,Lucknow((Period:January,2021toDecember,2021)

S.N.	Month	Total Waste	General Waste	Bio-MedicalWasteinKg								TotalBio-Medical Waste	Paper/ Cardboard	TotalWaste of per day per bed(Kg)
				Yellow (Incinerable Waste)	Yellow Waste/ Day	Red (Infected Plastic Waste)	Red Waste/ Day	Sharps	Sharps/ Day	Glass	Glass/ Day			
1	January,2021	1,56,137.00	1,18,930.00	13,690.00	441.61	19,076.00	615.35	243.00	7.84	4,198.00	135.42	37,207.00	1375	1.26
2	February,2021	1,51,339.00	1,16,755.00	10,627.00	379.54	19,161.00	684.32	237.00	8.46	4,559.00	162.82	34,584.00	2415	1.34
3	March,2021	1,80,161.00	1,40,377.00	13,263.00	427.84	21,109.00	680.94	250.00	8.06	5,162.00	166.52	39,784.00	1911	1.45
4	April,2021	1,24,556.00	90,517.00	16,063.00	535.43	15,426.00	514.20	159.00	5.30	2,391.00	79.70	34,039.00	897	1.04
5	May,2021	1,16,584.00	88,841.00	16,887.00	544.74	9,027.00	291.19	103.00	3.32	1,726.00	55.68	27,743.00	948	0.94
6	June,2021	1,29,825.00	1,00,845.00	12,916.00	430.53	12,948.00	431.60	179.00	5.97	2,937.00	97.90	28,980.00	837	1.05
7	July,2021	1,67,199.00	1,32,390.00	13,394.00	432.06	17,201.00	554.87	364.00	11.74	3,850.00	124.19	34,809.00	1654	1.35
8	August,2021	1,73,295.00	1,38,292.00	12,121.00	391.00	17,951.00	579.06	194.00	6.26	4,737.00	152.81	35,003.00	1640	1.40
9	September, 2021	1,84,002.00	1,47,059.00	11,897.00	396.57	19,549.00	651.63	266.00	8.87	5,231.00	174.37	36,943.00	3557	1.49
10	October,2021	1,72,428.00	1,38,622.00	9,478.00	305.74	18,579.00	599.32	260.00	8.39	5,489.00	177.06	33,806.00	1391	1.39
11	November, 2021	1,65,282.00	1,32,706.00	9,390.00	313.00	17,766.00	592.20	239.00	7.97	5,181.00	172.70	32,576.00	1251	1.34
12	December, 2021	1,81,308.00	1,44,605.00	11,566.00	373.10	19,347.00	624.10	215.00	6.94	5,575.00	179.84	36,703.00	1233	1.46

	GreenAuditAssessmentReport				
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4.3. GREENSPACEINTHEUNIVERSITYCAMPUSANDGREENINITIATIVES.

KGM University has taken various steps to develop green campus at the university such as the universityhasdone plantation attheuniversity andgeo tagging has beendone forthe plantsand trees. Also, university has developed some gardens at different location of the university. The details of the gardens are as follows;

Locationsof Lawn	Quantity	Locationsof Lawn	Quantity
V.C.Office	3Lawn	ParkingFaculty	3Lawn
Anatomy	2Lawn	VijayLaxmiHostel	2Lawn
FlowerpotV.C.office	3Lawn	NehruHostel	1Lawn
Pathology	2Lawn	ResidentHostel	4Lawn
S.P.M.	1Lawn	NewGuestHouse	2Lawn
FirePump	1Lawn	S.P.Hostel	5Lawn
Biochemistry	1Lawn	S.P.Ground	1Lawn
P.H.I.	1Lawn	conventionCentre	2Lawn
ForensicDepartment	1Lawn	V.C.Aavash	3Lawn
NearbyswinefluLab	1Lawn	C.V.Hostel New	2Lawn
katahalbaal	1Lawn	C.V.Hostel	2Lawn
U.G.Hostel	1Lawn	ConstructionDepartment	1Lawn
P.G.Hostel	1Lawn	K.C.H.	3Lawn
Kitchen(behindtheshatabdi)	1Lawn	B.M.W.	1Lawn
Shatabdikerul	1Lawn	Neurology	1Lawn
NewDental	4Lawn	NewO.P.D.	4Lawn
ChildrenDepartment	1Lawn	P.R.O.	1Lawn

	GreenAuditAssessmentReport				
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	Lucknow,UP	MedicalCollege	NA	17.09.2022	

Locationsof Lawn	Quantity	Locationsof Lawn	Quantity
FacultyAavash	3Lawn	FlowerpotGateNo.2	1Lawn
T.G.Hostel	5Lawn	BudhaHostel	2Lawn

4.4. AIR,NOISE&WATERQUALITYMONITORINGSYSTEM

KGM university has conducted a detailed assessment of air and noise quality form CSIR- Indian Institute of toxicology research. The study has been carried out in pre monsoon 2019. According to the study the, the air quality is on lower side and suspended particulate matter on the air is higher than the recommended WHO guidelines. The noise level is on higher side as per the standard limits.

However,continuousmonitoringforsuchparametersisnotdoneattheKGMuniversity.

4.5. ENERGYMANAGEMENTSYSTEM

TheenergydemandoftheKGMuniversityhasbeenfulfilledmajorlybythestateelectricityboard. Rooftopsolarpowerplantisalsoavailableatthefacility.Andforpowerbackup,multipleDGsets ofdifferentcapacity areinstalled atdifferent locations.The briefdetails oftheenergysources are as follows;

Sr. No.	Sourceofenergy	Capacity/Demand
1	StateElectricityBoard(thermalSource)	13.27MW
2	RooftopSolar(renewablesource)	1370KW
3	DGSet(forpowerBack-up)	8713KVA (Approx.)

Theinstalledcapacityoftherooftopsolarpoweris10%ofthetotaldemandoftheuniversity.

4.5.1. NON-RENEWABLEENERGYSOURCES

Presently, Solar Photovoltaic (PV) systems are installed in the campus to generate electricity. SuchasystemenablestheinstitutetoreduceitsdependenceonthegridofStateElectricityBoard (SEB).ExcesselectricityfromsuchaSolarPVplantcanalsobeexported/wheeledtotheSEBgrid to earn the monetary incentives for the institute. The total generation of energy from solar cells were 1370 KW.

	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

4.5.2. THERMALENERGYCONSUMPTION

Total twenty-three (23) power in comes from state electricity board are supplying power to the KGM university. Twenty (22) are at 11kV voltage level and one is at 33kV voltage level. The details of the energy consumption through state electricity board are as follows;

PowerConsumption	
SourcePower	MadhyanchalVidyutVitransLtd(33KV)&(11KV)
ContractDemand	13.27MW

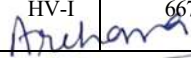
	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

The detailsoftheincomersareprovidedasbelow.

S. N.	Department/Place	ConnectionNo./Name	AccountNo.	Date of Connection	Tariff Type	Connected Load (kVA)	NameoftheBuildingservingbytheconnection
1	NewMortuary substation	678528Registrar,KGMU	3747481000	1/1/2001	HV-I	223	SardarPatelHostel/ResidentHostel,Physiology Department, Bio Chemistry department, SPM
2	C.T.V.S Department	700218Registrar,KGMU	9747481000	8/4/2011	HV-I	445	CompleteCTVSDepartment
3	HospitalSubstation	71595Registrar,KGMU	8547481000	1/1/2001	HV-I	1137	Radiotherapydepartment,Radiodiagnosisdepartment, Main hospital Building, Old OPD, Pharmacology Department, Old Neurology Building, Plastic surgery department, Medicine ward & M.R.I, C.T Scan, Ophthalmic
4	NewDentalExtension	703688Registrar,KGMU	5134370261	28/11/2012	HV-I	737	CompletenewdentalExtensionbuilding
5	Cobaltsubstation	613917Registrar,KGMU	9547481000	1/1/2001	HV-I	445	Medicine department, Plastic surgery department, surgerydepartment,I.D.H.building,oldneurology, Paediatric department
6	Psychiatricdepartment	00434Registrar,KGMU	1747481000	1/1/2001	HV-I	158	Psychiatricdepartment,Traumaemergencyroom, holding screening area & Geriatric mental
7	QueenmarryHospital	30339Registrar,KGMU	7547481000	1/1/2001	HV-I	411	CompleteQueenmarryHospital& OldLRHandNCRhostel.

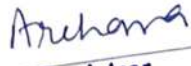
	GreenAuditAssessmentReport				
	LOCATION	TYPE	CODE	AUDITDATE	
	Lucknow,UP	MedicalCollege	NA	17.09.2022	

S. N.	Department/Place	ConnectionNo./Name	AccountNo.	Date of Connection	Tariff Type	Connected Load (kVA)	NameoftheBuildingservingbytheconnection
8	QMH(New100 Beaded)	4540285915Registrar,KGMU	4540285915	27/04/2019	HV-I	333.33	Complete100BeadedHospital(QMH)
9	TraumaCentre	689414Registrar,KGMU	5747481000	1/1/2004	HV-I	540	TraumaCentre(Groundfloorto3 rd Floor)
10	OldMortuary substation	005699Registrar,KGMU	7747481000	1/1/2001	HV-I	1087	Pathologydepartment,Microbiologydepartment,New old VL Girls Hostel, DK Hostel, VC Office
11	Teaching Block(Kalam)	703712Registrar,KGMU	9753334424	15/12/2014		2632	CompleteTeachingBlock,Hosteletec.
12	OldDentalbuilding (Dental Science University)	678537Registrar,KGMU	1214770000	15/07/2005	HV-I	45	Completeolddentalfacultybuilding
13	NewOPDBlock	703687Registrar,KGMU	4697779403	25/11/2012	HV-I	698	CompleteNewOPDbuilding
14	Cancerunit	678442Registrar,KGMU	4747481000	1/1/2001	HV-I	112	CompleteCancerUnit(QMH)
15	Type-5Faculty Building(J.N)	7200191928Registrar,KGMU	7200191928	16/02/2005	LMV-I	444.44	CompleteFacultybuildingA&B Block
16	OldDentalBuilding	566149Registrar,KGMU	6747481000	1/1/2003	HV-I	445	CompleteOlddentalfacultybuilding
17	Gautam Buddha	678569Registrar,KGMU	1133332000	23/05/2008	HV-I	667	CompleteGautambuddhaHostelblock


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S. N.	Department/Place	ConnectionNo./Name	AccountNo.	Date of Connection	Tariff Type	Connected Load (kVA)	NameoftheBuildingservingbytheconnection
18	ShatabdiHospital.	678594Registrar,KGMU	1647481000	29/04/2008	HV-I	1334	ShatabdiHospitalPhase-1,NewRainBasera,V.C Residence
19	Cardiology Department	577925Registrar,KGMU	2747481000	1/1/2001	HV-I	223	CompleteCardiologyDepartment
20	T.G.Hostel	9202Registrar,KGMU	7077481000	1/1/2001	HV-I	198	Faculty&employeesResidence
21	T.G.Hostel Residential	100057Registrar,KGMU	6357245033	15/12/2014	LMV-I	334	NursesHostel.
22	RALCBuilding (Artificial)	86966Registrar,KGMU	2157481000	1/1/2001	HV-I	334	OldOrthopaedic,DPMR,Rheumatology(Proposed Covid-19)
23	EmployeesQuarter Type	4042748045Registrar,KGMU	4042748045	16/02/2015	LMV-I	78	Type-1EmployeesQuarterNearRALC
24	EmployeesResidence Amrapali	T/CNo.94/2015-16Registrar, KGMU	not available	not available	NA	0	EmployeesResidenceblock-A&B
Total						13060.77	


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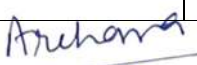
4.5.3. DIESELGENERATORS&DIESELCONSUMPTION

Diesel consumption at the KGM university is through Diesel generator sets only and those are used as a backup of the power supply. Total sixty-three (63) diesel generator are installed at the different location of the KGM university premise. The Details of the DG set is as follows;

S.N.	LocationofDG sets	KVA	Make	NumberofDG
1	RALCCampus,DPMRDept., Orthopaedic Dept., Rheumatology DG `	250 KVA	Greaves	2
		100 KVA	Kirloskar	1
		500 KVA	Supernova	1
2	GandhiWard	320 KVA	Cummins	2
		60KVA	Kirloskar	1
3	PROOffice	500 KVA	Cummins	1
		320 KVA	Cummins	3
4	NewDentalDept.OldDental Dept.	320 KVA	Cummins	1
		125 KVA	Kirloskar	1
		61KVA	Kirloskar	2
5	GeriatricMentalDept.,Mental Dept., Adolescent Psychic	100 KVA	Kirloskar	2
		62.5KVA	Cummins	1
		125 KVA	Jackson	1
6	TraumaCentre	250 KVA	Cummins	3
		125 KVA	Cummins	1
7	CTVSDept.	320 KVA	Kirloskar	1
		125 KVA	Kirloskar	1

	GreenAuditAssessmentReport				
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S.N.	LocationofDG sets	KVA	Make	NumberofDG
8	QueenMaryDept.	250 KVA	Greaves	1
		250 KVA	Cummins	1
		125 KVA	Kirloskar	2
9	Microbiology, VirologyTVLab	250 KVA	Cummins	2
		250 KVA	Kirloskar	1
		125 KVA	Cummins	1
10	PathologyDept.	200 KVA	Greaves	1
		45KVA	Kirloskar	1
11	PHIBhawan	62.5KVA	Kirloskar	1
12	Library & Administrative Building, RHhostel, Marchery, New guest house, Nehru hostel.	200 KVA	Cummins	1
		20KVA	Kirloskar	1
		50KVA	Cummins	1
		45KVA	Kirloskar	1
		7.5KVA	Kirloskar	1
13	TGHostel	125 KVA	Kirloskar	1
		125 KVA	Kirloskar	1
14	ShatabdiPhase-1	500 KVA	Kirloskar	1
		500 KVA	Cummins	1
		10KVA	Kirloskar	1
15	ShatabdiPhase-2	500 KVA	Cummins	3


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S.N.	LocationofDG sets	KVA	Make	NumberofDG
16	Lary Cardiology	250 KVA	Greaves	2
		125 KVA	Cummins	1
17	NewOPD	250 KVA	Cummins	2
18	SPMDept.	62.5KVA	Kirloskar	1
19	FacultyAccommodation	62.5KVA	Greaves	2
20	ITCell	30KVA	Kirloskar	1
21	KalamCentre	320 KVA	Cummins	2
22	AdvanceResearch	45KVA	Kirloskar	1
		15KVA	Kirloskar	1
23	BurnUnitPlasticSurgeryDept.	250 KVA	Kirloskar	1

The diesel consumption details for the financial year 2022-23 is as follows;

Month	Diesel Consumption(Liters)
Apr-21	2,570.0
May-21	6,240.0
Jun-21	5,660.0
Jul-21	4,310.0
Aug-21	900.0
Sep-21	-
Oct-21	4,540.0

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Month	DieselConsumption(Liters)
Nov-21	3,900.0
Dec-21	3,190.0
Jan-22	4,000.0
Feb-22	2,700.0
Mar-22	2,600.0
Totalconsumption	40,610.0

4.6. CARBONFOOTPRINTS

A carbon footprint is a total greenhouse gas (GHG) emissions caused directly and indirectly by a person, organisation, event or product and is expressed as a Carbon Dioxide equivalent (CO₂-e)

The KGMU is highly conscious regarding the energy consumption within the campus. This is testimony to the fact that it has executed a number of energy efficiency as well as renewable energy projects to reduce the energy consumption as well as dependency on the fossil fuel-based energy sources.

Some of the energy conservation and renewable energy measures as were executed:-

- The management replaces regular 250 W sodium lights with 120 W LED lights. Around 600 such LED lights installed for the indoor areas of the hospital, replacing the old 150 lights and addition of remaining 450 new lights. The team also replaces 12 High-mast lights of 850 W with those of 250 W lights, in the outdoor areas.
- Installation of APFC panels for Power Factor improvement and thereby KVAh Consumption reduction.
- Use of Concentrated Solar Thermal system to provide steam for the cooking in lieu of LPG
- Installation of rooftop Solar PV power plant of 1370 kW.
- Plantation activities around the premise and geo tagging of the plant at the university premise.

The carbon footprint of the hospital is as below based on the present energy consumption:-

	GreenAuditAssessmentReport				
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Items	Units /Year	Quantity	Emission Factor	kg of CO ₂ -e	Remarks
Electricity Consumption	kWh	26282700	0.85	22340295	Fromenergyauditreport
Petrol	Liters	250000	2.296	574000	Approx.(considering2000 cars in a day in university campus)
Diesel	Liters	40610	2.653	107738.3	Fromenergyauditreport
LPG	kg	168891	2.983	503801.9	Fromenergyauditreport
CarbonFootprint (t CO₂-e)	23525.84				

There should be a regular effort to further improve on the carbon footprint as mentioned above. This is possible by undertaking various energy conservation and renewableenergy measures as mentioned in various chapters in this report. Besides taking such measures, the hospital also needstoundertakearegularmaintenanceofthealreadyinstalledsystems inoperationforitsbest result expected.

4.7. TRAINING, COMMUNICATION & AWARENESS

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

At KGM University, classroom lectures, field visits, presentations, case studies, group exercises, assignments and discussions are required to provide training and awareness at the campus.

5. CONCLUSIONS & RECOMMENDATIONS

Green Audit is the most efficient way to identify the strength and weakness of environmentally sustainable practices and to find a way to solve problem. Green Audit is one kind of professional approach towards a responsible way in utilising economic, financial, social and environmental resources.

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At KGM university, there is scope for further improvement, particularly in relation to waste water management, energy and water management. Also, action needs to be taken for monitoring air, noise and water quality at the university premise. The suggestions are as follows;

- Digital water flow meter shall be installed at each borewell at the university and hostel campus to calculate the daily water consumption of the university. Along with this, it is recommended to install piezometer to monitor the groundwater level, one piezometer at university campus would be sufficient.
- During the audit, 6636 KLD (approx.) of daily water consumption has been calculated on the basis of running hour and discharge capacity of the pump. It is recommended to conduct a detail water audit for the facility as the water consumption is on higher side and steps shall be taken to reduce the water consumption at the university. Also, it is suggested to measure the annual recharge potential through rain water harvesting structures.
- Total 1370 KW of rooftop solar panels is installed at the university; which is 10% of the total power demand of the university. Steps shall be taken to increase the solar power (renewable power sources) to achieve usage of maximum green energy for the university campus. This would help to reduce the consumption of the diesel at the site and thus will reduce the carbon emission.
- Petrol and diesel operated vehicles are being used at the university campus for commuting from one area to another. KGM University can take some steps to introduce the electric carts or e-rikshaws at the university premise to reduce the carbon footprints of the university.
- KGM university shall develop a system for monitoring the air and noise pollution at the university and these parameters shall be monitored daily at the university campus.
- The waste water of the entire university shall be treated. For this purpose, only one STP unit of 500 KLD is installed at the university campus. However, university is working on the other STP units.
- M/s Synergy Waste Management (P) Ltd. is handling the waste of the KGM University. The total maximum quantity permitted to the vendor is 1103.36 kg/day of yellow type of waste, 68.18 kg/day of red type of waste and 12.17 kg/day of white type of waste. However, as per the record, the average waste generated in year 2019 was 325.45 kg of yellow waste per day and 663.48 kg of red waste per day. In year 2020; 329.23 kg of yellow waste per day and 458.83 kg of red waste per day was generated. In year 2021; 414.26 kg of yellow waste per day and 568.23 kg of red waste per day was generated. Hence, it is recommended to review the daily quantity of the waste permitted for handling to the vendor and action shall be taken accordingly.

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6. ANNEXURES

SpecialRecognitionaward



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4 दैनिक जागरण लखनऊ, 22 जुलाई 2019

लखनऊ जागरण

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पॉलीथिन के 'रोग' से भी मुक्ति दिला रहे डॉक्टर

संवाद: प्रदीप • लखनऊ

किंग जार्ज मेडिकल यूनिवर्सिटी (केजीएमयू) के डॉक्टर मरीजों के साथ अब पॉलीथिन को भी रोग मुक्त करने में जुट गए हैं। करीब छह माह पहले ये डॉक्टरों ने ग्रहण छेड़ें। इससे पहले हुए कई डॉक्टर अब उनके समर्थन बन चुके हैं। वे प्लास्टिक घर को पुरानी साड़ियों से अलपत्रक बिले बनवा रहे हैं। इसे स्टचर एवं फील्डरों की सहायता पॉलीथिन पर इस्तेमाल न करने के लिए जागरूक किया जा रहा है।

कैंसर विभाग में तैनात डॉ. कोर्निल सक्सेना और एनेस्थेसिस्ट डॉ. एन.के. सक्सेना छह माह पूर्व एक दिन पॉलीथिन से होने वाली जानलेवा पोचरियों पर बात कर रहे थे। इसी में उन्हें पत्रिक को पॉलीथिन से मुक्ति दिलाने की बुद्धि सूझी। दोनों ने अपने घर की पुरानी साड़ियाँ बरतकर और उससे बिले बनकर पॉलीथिन के सक्सेना की मुक्ति शुरू कर दी। इसके और जब में रहने लायक ने

केजीएमयू चिकित्सकों की मुहिम से बम रहा पॉलीथिन का उपयोग पुरानी साड़ियों से बना रहे बिले



केजीएमयू में सारी से तैयार बिले के बारे में जानकारी और डॉ. कोर्निल सक्सेना और डॉ. एन.के.

बिले लोगों को बिले भए। बीरे-बीरे इस अधिवक्ता से डॉ. अनुपम पाण्डेय, डॉ. एल.के. जयसवाल, डॉ. रीमा कुमारी, डॉ. प्रजा और डॉ. शिवाजी जुड़ते गए। इस तरह बिले बनने लगे और बिले बन रहे हैं। अब तक इस मुहिम के तहत करीब

बीमार बना रहा पॉलीथिन

पॉलीथिन प्रदूषण को ही नहीं इससे को भी बीमार बन रही है। डॉ. सक्सेना के अनुसार, पॉलीथिन के जहरीले तरल मूत्र के साथ भ्रमण जल को भी प्रदूषित कर रहे हैं। इसे जलाने पर बहुत प्रदूषण हो रहा है। पॉलीथिन से होने वाला प्रदूषण इससे भी फैफड़े पर फैल, धमन रोग, रक्त रोगों बीमारियाँ, दिल और बगड़े से जुड़े गंभीर समस्याएं पैदा कर रहा है।



पर्यावरण संरक्षण

एक साड़ी के बदले लें दो बिले

केजीएमयू के डॉक्टरों की टीम अपनी इस अभियान मुहिम से जन-जन को जागरूक कर रही है। इसके लिए सक्सेना के डिपार्टमेंट ऑफ इन्वैस्टमेंट में सारी साड़ियाँ केंद्र बनाए गए हैं। डॉ. कोर्निल के मुताबिक, किसी भी कार्यवाही के दौरान खर्च आकर कोई भी व्यक्ति पुरानी साड़ी दान कर सकता है। एक साड़ी के बदले में उन्हें दो बिले भेंट किए जायेंगे।

सहमंद कल का ड्रीम

इस मुहिम में जुटे विद्यार्थियों का समय ही नहीं संरक्षण भी इसमें खर्च हो रहा है। एक बड़े बिले के निर्माण में 10 रुपये का खर्च आ रहा है। यह खर्च डॉक्टरों की टीम अपनी साड़ियों से उठाती है। सारी का इस्तेमाल बिले न हो, इसके लिए विद्यार्थियों को बिले आकर्षक बिले भी बनवाए जाते हैं। पत्रिक को पॉलीथिन मुक्त बनाने की यह मुहिम बहर भी आगे बढ़ रही है।

न खरीदें पारा वाला थर्मामीटर, फूटने से जहरीला हो सकता है घर का वातावरण

केजीएमयू में स्वच्छता और मेडिकल कचरा प्रबंधन पर कार्यशाला में विशेषज्ञों ने भी सलाह

अनुराग शर्मा

लखनऊ। घर में पारा वाला थर्मामीटर रखना - खतरनाक है। इसके धूर जलने से पूरे घर का वातावरण जहरीला हो सकता है। जो बच्चा है कि अब घर और अस्पताल में सफाई करने वाली महिलाएं भी पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।



अनुराग शर्मा

कल अस्पताल की केजीएमयू के कार्यक्रम में, डॉ. सक्सेना और डॉ. सक्सेना के द्वारा पारा वाले थर्मामीटर के खतरा के बारे में जानकारी दी गई। डॉ. सक्सेना ने कहा कि पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।

थर्मामीटर टूट तो खोलें घर के बिजली-दरवाजे

जो भी पारा धूर हो वातावरण में फैलने से बचने के लिए डॉ. सक्सेना ने कहा कि पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।

निहाल से संरक्षण का खतरा

डॉ. सक्सेना ने कहा कि पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।

एलाइट को सौंपे जायें वेस्ट

डॉ. सक्सेना ने कहा कि पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।

mycity

सुधकर • 20.02.2019

मेडिकल कचरे का सही निस्तारण करना जरूरी



लखनऊ। मेडिकल कचरे को सही ढंग से निस्तारण करना जरूरी है। इसके लिए डॉ. सक्सेना ने कहा कि पारा वाले थर्मामीटर से जहरीला वातावरण में रहने से बचें। वे सारी छेड़ें, अस्पताल काचरा नें काटें।

Aruchana

Registrar

King George Medical University
Lucknow

Aruchana

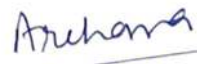
Registrar

King George Medical University
Lucknow

Action Taking Report on Green Audit Report dated. 17.09.2022.

SNo.	Recommendation of Audit	Action Taken
1.	Installation of digital water flow meter at each borewell	Digital water flow meter installed at ten locations
2.	Installation of piezometer to monitor the ground water level	Installed at Gandhi Ward
3.	To conduct detail water audit and to improve rain water harvesting	Rain water harvesting system is installed in all newly constructed buildings
4.	To increase solar power generation in the university	Installation of new solar panel is under process
5.	To increase use of electric vehicle	Electric vehicle are used for transfer of medicine and other supplies through HRF. Electric vehicle also used for transportation of persons. Faculties are also encouraged to use electric cars and many faculties are using electric car for their daily commute.
6.	Monitoring Aar and Noise pollution	Air Pollution is monitored by IITR, CSIR twice a year in the campus.
7.	New STPs need to be installed	Two STPs are already functioning and installation of more STPs are under process.
8.	To increase the recommended capacity of vendor handling bio medical waste	The University Environment dept. recycles red category waste and white category waste in the campus with permission of UP State Pollution Control Board. And yellow category waste is handed over to the vendor for incineration which is well within the approved limit of the vendor.


(Prof. Mohd. Parvez Khan)
Core Committee Member
University Environment Dept.
KGMU, UP, Lucknow


Registrar
King George Medical University
Lucknow



AirPollutionReport



लखनऊ शहर की परिवेशीय वायु गुणवत्ता का आंकलन पोस्ट मानसून-2023



विषविज्ञान भवन परिसर



डॉ. सी.आर. कृष्णमूर्ति परिसर



सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
VISHVIGYAN BHAVAN, 31, MAHATMA GANDHI MARG, LUCKNOW-226001, U.P., INDIA
विषविज्ञान भवन, 31, महात्मा गान्धी मार्ग लखनऊ-226001, उ.प्र., भारत



लखनऊ शहर की परिवेशीय वायु गुणवत्ता का आंकलन पूर्व मानसून-2024



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Aruhana
Registrar
King George Medical University
Lucknow



KING GEORGE'S MEDICAL UNIVERSITY
LUCKNOW UTTAR PRADESH INDIA
ESTD 1905
INTERNAL QUALITY ASSURANCE CELL



Ref: 85/Dean Q&P/2025

Date: 28-03-2025

To,
M/s CDG Inspection Ltd.
Plot no 37/08, Unnamed Road
IMT Manesar, Gurugram, Haryana - 122052

Subject: Work Order for Environment Audit, Green Audit, and Energy Audit of King George's Medical University, Lucknow

Dear Sir,

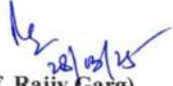
With reference to your proposal dated 26-03-2025 and subsequent discussions, we are pleased to issue this work order for conducting the Environment Audit, Green Audit, and Energy Audit of King George's Medical University, Lucknow.

The terms of the work order are as follows:

1. **Scope of Work:** As per the proposal submitted by M/s CDG Inspection Ltd., including Environment Audit, Green Audit, and Energy Audit of the entire university premises.
2. **Total Contract Value:** Rs. 1,38,000/- (Rupees One Lakh Thirty-Eight Thousand Only) plus applicable GST.
3. **Payment Terms:** Payment will be made as per mutually agreed terms and upon successful completion of the audit and submission of the final audit report.
4. **Time Frame:** The audit shall be completed within two weeks from the date of issuance of this work order.
5. **Deliverables:** Comprehensive audit reports covering all aspects mentioned in the proposal.
6. **Compliance:** The audit shall be conducted in compliance with applicable regulations and standards.

Kindly acknowledge your acceptance of the work order latest by 31-03-2025. We look forward to your cooperation and successful completion of the audit.

Yours sincerely,


(Prof. Rajiv Garg)
Dean, Quality & Planning

Encl: Copy of the Proposal dated 26-03-2025



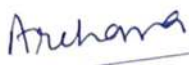
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Registrar
King George Medical University
Lucknow

