

**WASTE MANAGEMENT AUDIT REPORT
FOR
Poornima Institute of Engineering and Technology
ISI-2, RIICO Institutional Area, Goner Road,
Sitapura, Jaipur - 302022**



**Carried On
30th Jun, 2021**

Carried Out By



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1. INTRODUCTION

Poornima Institute of Engineering & Technology, was established in 2007 with the aim of imparting pragmatic technical education. In its magnificent journey of 12 years, PIET has set benchmarks and reached at new pinnacles in Engineering Education with dedication, perseverance and devotion. PIET is spearheading its outstanding voyage with the motto 'Success is not a destination, it's a journey'.

Vision

To create knowledge based society with scientific temper through cutting-edge technologies, innovative research and to become valuable resource for enriching mankind.

Mission

1. To provide an environment that will allow students and faculty members to be skilled in creation and implementation of new ideas.
2. To provide platform to improve questioning, observing, testing, analyzing and communication skills.
3. To provide qualitative education and generate new knowledge with integration of emerging technologies and research.
4. To practice and promote high standard of potential ethics, transparency and accountability.

Elion Technologies and Consulting Pvt Ltd (Elion) team carried out remote audit of premises on 30th Jun, 2021. The audit was carried out using online meeting platform google hangout, prior to Audit questionnaire and checklists was shared with the client. During the audit Elion team carried out virtual visit of entire campus i.e. classrooms, library, washrooms, staff rooms, administration department, accounts department and hostels.

Campus Information

The college is offering courses in following fields:

Number of course/Programs: 3

- Computer Science
- Civil Engineering
- Artificial Intelligence & Data Science



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List of courses/Programs applied for closure (2020-21)

- Electrical Engineering (EE)
- Electronics & Communication (EC)
- Mechanical Engineering (ME)

Details of the infrastructure of Poornima Institute of Engineering & Technology is as per below:

Total Area: 96267.19 sq.ft

Green Area: lawn area(Front) 2300 sq.feet & lawn area(Back) 1014 sq.feet

Building Name	Areas (sq.ft)	Number of Floors
Block A	11142.5	4
Block B	4902.16	3
Block C	31938.11	4
Block D	10620.42	4
Gurushikhar Boys Hostel – GS-1	4412	5
Gurushikhar Boys Hostel – GS-2	5730	5
Gurushikhar Boys Hostel – GS-3	4416	5
Gurushikhar Boys Hostel – GS-4	4416	5
Gurushikhar Boys Hostel – GS-5	4416	5
Gurushikhar Boys Hostel – GS-6	4416	5
Gurushikhar Boys Hostel – GS-7	4416	5
Faculty Apartment	5442	5

During Audit, ELION team interacted with following stakeholders:

Name	Designation
Dr. Gautam Singh	Registrar & Chief Proctor
Dr. Sama Jain	Professor & HOD First Year
Mr. Ashwani Lata	Director(Student Welfare)


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2. ENVIRONMENTAL SETTING

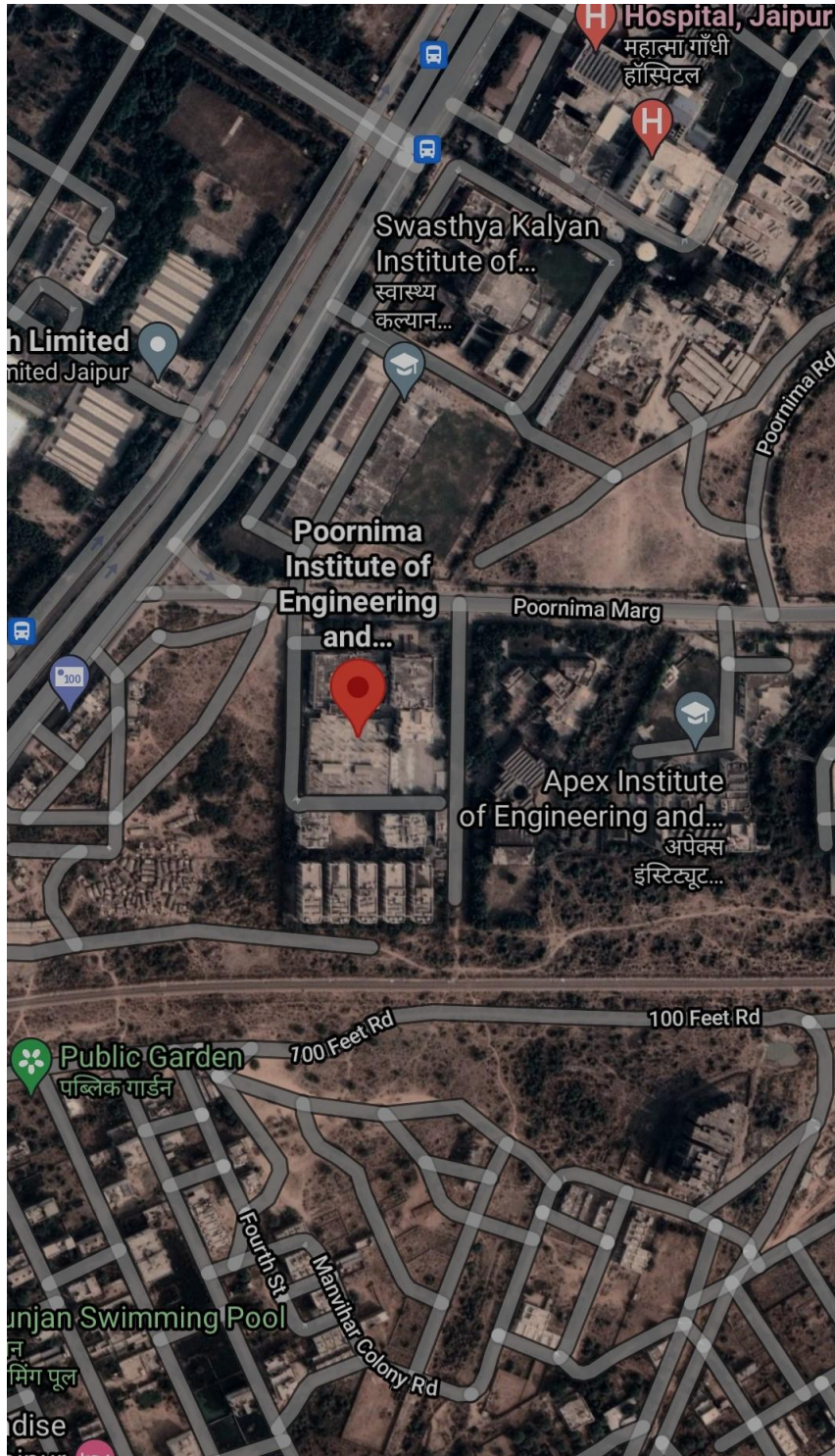
The land use around the campus is mainly mix of residential and commercial area. There are educational institutes such as Apex Institute of Engineering and Technology and Swasthya Kalyan Institute, Garden and Hospital.



Poornima Institute of Engineering and
Technology Campus

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Location of Poornima Institute of Engineering and Technology Campus


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3. WASTE MANAGEMENT AUDIT

For Waste Management Audit following 3 major areas (including their subsections) were covered and compliance/ initiatives under these areas were verified/ validated.

- a) Paper Waste Management
- b) E-Waste Management
- c) Canteen and Solid Waste Management

3.1 Paper Waste Management:

Being academic institution, waste paper is the main solid waste generated in the premises. College has a Waste Policy to monitor all types of waste generated in the institute. College has taken steps to minimize and avoid paper usage.

It was observed that:

- a) Prints and photocopies are taken on both sides of the pages to avoid excess paper usage. Rather than photocopy, digitalization (scanning) is practiced.
- b) Faculty and administration staff uses old papers and envelops for internal usages as rough work, file markers, page separators etc.
- c) Paper notices are displayed on the notice boards. Most of the storage is in library and staff room. After couple of years, old submissions and answer papers will be archived and stored in record room.
- d) Internal notices and communications are through E-mail/SMS.

3.2 E-Waste Management:

- a) PIET is digitalized to a large extent. This includes classrooms, library, internal mails etc.
- b) MOU is signed for the disposal of E-waste in the campus.

3.3 Solid Waste Management:

It was observed that:



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- a) Wet waste and dry waste segregation is practiced in the premises. Separate bins are provided for wet biodegradable and dry recyclable waste.
- b) Waste is collected through waste collection agency.



MOU for garbage disposal



Waste Management


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4. RECOMMENDATIONS/ SUGGESTIONS

- Inventories of all solid waste generated in the premises must be maintained.
- Enhance recycling. This can be done by creating a group where students can recycle books, personal clothes and other material to needy students. This can be an initiative under green program.
- The college can introduce online app, which can be useful for conducting internal exams, assignment/ reports submission. This system can also be used for displaying important notices, timetables.
- Paper usage shall be monitored to understand the impact of digitization in the facility.
- Training as well as awareness programs should be organized on segregation of biodegradable waste and recycling of waste. Efforts should be taken to inform students about recycling options and signs should be posted on appropriate bins indicating what could be dumped in each bin.


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Waste Management Policy

Of



POORNIMA

INSTITUTE OF ENGINEERING & TECHNOLOGY

Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NAAC and NBA

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Executive Summary

Higher education institutions (HEIs) enjoy tremendous autonomy in terms of managing their natural resources. They are virtually independent and are internally regulated, while civilians, businesses, industries and others are subjected to, with close external monitoring and accountability. PIET endeavors to adopt practices that reflect a comprehensive approach to conserving resources and reducing and managing waste. Waste prevention, reuse, recycling, and composting are prioritized over landfill disposal. In order to minimize our environmental footprint; to provide guidance to the Institute community on best practices for reducing and recycling waste; and to promote adherence to environmental law, this policy establishes a sustainable, solid waste management program that communicates acceptable methods of handling, storing, recycling, and disposing of materials



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Definitions

Electronic waste or e-waste:

Electronic materials or appliances that are at the end of their useful life. Electronic equipment often contains sensitive data and hazardous materials (lead, chromium, cadmium, mercury, beryllium, nickel, zinc, brominated flame retardants, etc.) whose disposal is regulated. Common electronic appliances include computers, printers, monitors, microwaves, telephones, televisions, laboratory appliances, and refrigeration units (freezers, refrigerators, and air conditioners).

Hazardous waste:

Any material that

- (i) exhibits hazardous characteristics as defined by federal or state law,
- (ii) is unusable or unwanted in any way, and
- (iii) Poses a potential hazard to individuals, the environment, or public health. Hazardous waste includes, but is not limited to, chemical, radioactive, or potentially infectious waste.

Municipal solid waste:

Everyday items used and then thrown away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, and appliances. Municipal solid waste is commonly known as trash or garbage. Non-research area: an area on Institute property that is not a teaching or research laboratory. Specially-regulated waste: a subset of hazardous waste comprising materials that are subject to specific regulations. Examples include potentially infectious medical waste (PIMW); other biological waste; sharps waste; asbestos waste; regulated polychlorinated biphenyl (PCB) waste; cutting oils and used oil; paint sludge; equipment cleanings; metallic dust sweepings; used solvents from parts cleaners; and off specification, contaminated, or recalled wholesale or retail products.

Universal waste:

A category of waste materials designated as hazardous, but containing materials that are common or widely generated in the environment. Universal waste includes batteries, pesticides, lamps, thermostats, and other mercury-containing equipment.



About the Institute

Poornima Institute of Engineering & Technology, was established in 2007 with the aim of imparting pragmatic technical education. In its magnificent journey of 12 years, PIET has set benchmarks and reached at new pinnacles in Engineering Education with dedication, perseverance and devotion. PIET is spearheading its outstanding voyage with the motto 'Success is not a destination, it's a journey'.

Highlights:

- State of Art of Infrastructure for innovative Teaching Pedagogy and ICT based learning
- Offering five streams of Engineering (CE, ECE, EE, ME & Civil) at UG level.
- Ranked 4th by Rajasthan Technical University under Quality Index Value Framework
- Accredited with NBA for B.Tech CSE & B.Tech EE in 2018
- NAAC Accredited institute from 2019
- Arbuda Convention Center: A Multimedia Auditorium with 500+ seating capacity.
- PBIC: The Entrepreneurship & Innovation Cell
- Six Industries started by PIET students under entrepreneurship named as MADTY Trips, Rashion Baf, DIFF THINK Initiatives & SHOPIENO.
- Campus oriented for Techno Managers.
- IEEE, ISTE, IE (I) and ISLE Student chapters.
- Organized workshops on various Technical and Non-Technical topics.
- Completely Wi-Fi enabled campus.
- Several projects sponsored by AICTE & DST, Govt. of Rajasthan.
- Collaboration with IBM for research on Business Intelligence and Cloud Computing.
- Hands on Learning with Project Oriented Lab & Non Syllabus Projects
- Focus on outcome based education with proper mapping through, CO's PO's, & PSO's
- More than 10 SCI/Scopus & around 80 UGC Publications in 5 years
- Research Grants of more than 30 Lac in 5 years
- Regular and quality placements in all Major MNC's like Infosys, Capgemini. IBM, Adani, etc.
- Industry oriented labs for quality education IBM, Oracle, FACE, Redhat, CESA etc.
- Activities in association with NEN, AICTE, DST, RTU
- Regular conduct of National & International Conference/Workshop/Seminar etc
- Students oriented activities through Clubs & Student council
- Placement oriented initiatives for skill development and Outcome of quality placements



- Rigorous and transparent Continuous Internal Examination System
- Within in the ambit of University Syllabus, offering quality academic flexibility
- Tutor Mentor system for support & Stress management
- Faculty Felicitations & Reward system and similar systems for students
- Concerned for Environment & sustainability, Waste Management, Rain Water Harvesting,
- Value Added courses & Certification courses offered across all disciplines
- Well laid down Teaching Learning Process, with extreme focus of quality delivery
- Established ERP system for Feedback mechanism
- Catering to diverse category of students from all regions of nation
- Faculty members getting recognised at National & International level
- Catering to society under CSR activities
- Facilities for Sports, Gymnasium, Cultural Activities, Auditorium
- Rich library with IEEE subscription
- Quality hostel & accommodation facility



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Sustainability at Poornima Institute

Poornima Institute of Engineering & Technology (PIET) has adopted a lot of green features which benchmarks the institute's idea for promoting "sustainability".

The three pillars of the sustainable Institute are:

- **Reduced environmental impact of our actions**

Reducing environmental impact includes reducing the damage inflicted on our environment by our activities. For example, by reducing energy and water use, reducing and recycling waste we can prevent over exploitation of our resources.

- **Increased health and well-being of students/ staff**

Increased health and well-being involve protecting student and teacher health and ensuring a clean and healthy indoor environment in the Institute, as well as providing programs and services for good nutrition and physical activity.

- **Increased environmental and sustainability awareness for all students**

Increased environmental and sustainability awareness for all students involves teaching students about sustainability and the environment and equipping them with the tools they need to solve the global challenges we face now and in the future. Education at PIET supports this type of literacy both through a curriculum as well as through instructional practices that are interdisciplinary, place-based and rooted in the context that uniquely surrounds each student.

Introduction

This Waste Management Policy forms part of the Institute's sustainability framework and helps support the Institute's idea for Climate Change and Social Responsibility.

The policy's aim is to reduce negative environmental impacts arising from our generation of waste arising's, seeking to prevent, reuse, repurpose and reduce waste from our operation. The Policy also aims to ensure that the Institute manages waste issues in accordance with the prevention of pollution and compliance with environmental legislation at all times. The Institute is committed to implementing an effective and responsible waste resource management process that meets and ideally exceeds legislative, regulatory and best practice legislation and guidance. The Institute has a "Duty of care" to effectively manage waste and this is a legal obligation to ensure the safety or well- being of others.



Policy Aims

The Institute adopts the ‘waste hierarchy’ of prevention, reuse, recycling, other recovery and disposal. The Institute implements processes, procedures and initiatives that ensure compliance with environmental legislation and best practice and which encourage waste producers to reduce the overall waste that they produce, and prevent waste production wherever possible. The Waste Hierarchy Stages Includes the Institute has a robust and comprehensive recycling infrastructure and all staff and students are encouraged to make use of these facilities in order to help recycle as much waste as is possible. The Institute Waste Management Policy also includes the need to consider end of life disposal costs and environmental impact when making procurement decisions including the construction of new or refurbished buildings. PREVENTION RE-USE RECYCLING RECOVERY DISPOSAL Using less material in design; keeping products for longer; using less hazardous material. Preparing for re-use; cleaning; repairing, refurbishing. Turning waste into a new substance or product, including composting. Anaerobic digestion – conversion to biogas for electricity generation; incineration with energy recovery. Landfill and incineration without energy recovery.

The Policy also ensures that we are complying with regulation, legislation and best practice in order to minimize the risk of immediate and future pollution or harm to health when carrying out operational activities.

The objectives of this policy are

- ✚ To ensure that waste management is performed in accordance with all waste legislative requirements, including the duty of care, and to plan for future legislative changes and to mitigate their effects.
- ✚ To minimize waste generation at source and facilitate repair, reuse and recycling over the disposal of wastes, where it is cost effective.
- ✚ To provide clearly defined roles and responsibilities to identify and co-ordinate each activity within the waste management chain.
- ✚ To promote environmental awareness in order to increase and encourage waste minimization, reuse and recycling.
- ✚ To secure where possible revenue for recyclable material to reinvest into the expansion of recycling opportunities available to the Company.
- ✚ To ensure the safe handling and storage of wastes at all office locations and construction sites. To
- ✚ provide appropriate training for staff, supply chain partners and clients on waste management issues.
- ✚ To promote industry waste management best practice.
- ✚ To appoint competent person(s) to provide waste management advice.



Waste Management

The Institute has in place a number of internal and external waste management and recycling facilities.

Compliance

Faculties and Professional Services, Students, Contractors and other users are required to have appropriate procedures and waste management processes in place as applicable to ensure that waste generated is managed, stored and disposed of safely and in line with the Institute's policies. Waste Transfer Notes must be obtained by the Faculty or Professional Services Department when using an external approved service provider/contractor to dispose of waste.

Waste minimization

Waste should be prevented or minimized wherever possible. The Institute encourages staff, students to minimize plastic waste as much as possible by using reusable bottles or glasses for drinking water. The Institute is particularly keen to reduce, reuse and recycle plastic items, particularly bottles as well as disposable coffee cups. Reusable mugs are available to purchase from all campus retail outlets with discount incentives provided to users. The Institute's catering section provides non-disposable items at events and functions and uses materials such as glass where possible to reduce the use of plastic.

Health & Safety

Waste must be stored in compliant and suitable containers in the designated locations prior to disposal by a licensed waste contractor. Waste containers must be securely closed and sealed where necessary in order to prevent the release of waste from the receptacle. Waste must not be stored in plant rooms, service ducts or service risers, blocking fire exits or in undesignated external areas. Waste and recycling removed from the Institute must only be transported by persons or service providers who are licensed to do so.

Our Waste Streams



The Institute encourages the recycling of the following materials:

- Paper and Card, including Confidential waste
- Metal and Aluminum cans
- Plastic Bottles
- Glass
- Food

The Institute also enables safe disposal of various other items such as batteries and decontaminated lab plastic, and provides up-to-date guidance to staff and students on disposal routes and processes.

Reduce, Reuse and Recycling Resource



The strategy uses the principle of the waste hierarchy:

1. REDUCE – the best approach to waste is to reduce it at source.
2. REUSE – if you cannot reduce it, then try to re-use it.
3. RECYCLE – if you cannot reuse it, then try to recycle it.



The materials segregated are:

- All paper products (excluding blue roll)
- Cardboard
- Wood
- Metal
- Media waste – CD's; DVD's; floppy discs; videos; audio cassettes
- Plastic bottles, packaging, cups, food containers and all metal cans
- Glass
- Garden waste
- Batteries
- Tiles
- Waste Oil
- Food
- WEEE – waste electrical & electronic equipment
- Furnitu