



MES PONNANI COLLEGE

www.mesponnanicollege.ac.in

Govt. Aided Institution | Affiliated to the University of Calicut

Estd. : 1968 | Recognized under UGC 2(f) & 12(B)

NAAC Re-accredited (II Cycle) with 'A' Grade

ENVIRONMENT AUDIT



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ENVIRONMENT AUDIT



MES COLLEGE PONNANI

MALAPPURAM

Kerala

EXECUTED BY



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ACKNOWLEDGEMENTS

We express our sincere gratitude to the management of MES College Ponnani for giving us an opportunity to carry out the project of Environment Audit. We are extremely thankful to the MES College for their support to carry out the studies and for input data, and measurements related to the project of Environment audit.

College Team Members

1

2

3

Also congratulating our Environment audit team members for successfully completing the assignment in time and making their best efforts to add value.

Environment Audit Team

1. Mr. Santhosh A

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Accredited Energy Auditor No – EA 7597

2. Mr. Ashok KMP

Registered Energy Manager of Bureau of Energy Efficiency (BEE – Govt. of India)
Energy Manager No – EA 25612, Griha Professional

3. Ms. Jijiraj K R, Project Engineer, B-Tech – Electronics and communication.

4. Mr. Harikrishnan K, Project Engineer, B-Tech - Production Engineering.



Yours faithfully

Managing Director
Athul Energy Consultants Pvt Ltd

EXECUTIVE SUMMARY

Waste management:

- Incinerator provided to dispose the non-biodegradable waste which burns in the range of 800 to 1000 °C to reduce the emission of dioxin and furans
- Due to high water level of ground water biodegradable wastes generated from canteen cannot be used in bio gas plant Hence they are made into composting and it is used for plants and trees, gardening and for fertiliser for cultivation of vetiver.

Suggestions for Improvement.

- Internal inspection team to be formed which comprises of staff and students.
- Introduce 'refuse plastic' concept among college for inventories. This will spread among students and staffs and percolate into their behaviour.
- Segregation and collection of wastes done on every month and record the same which will be an eye-opener and we can control on that data basis.
- E- Waste generated to be disposed through get an MOU or agreement with Pollution control board certified agencies

GENERAL DETAILS

The general details of the MES College Ponnani is given below in table based on the data availed from the college, in between the Jan 2019 to Dec 2019. The data based on the electricity bill, solar and diesel generated units, human resources and finance department of the college.

SL. NO	PARTICULARS	DETAILS
1	Name & Address	MES College, Ponnani South, Malappuram—679586 0494-2666077 principalmesponnani@gmail.com
2	Contact person	Capt. Muhammed Koya CT, Principal
3	No. of Employees	110
4	Building area (m ²)	
5	Number of students (Nos)	640
	No: of electrical Connections	05
	Annual energy consumption	
	Annual amount for electricity paid	
7	Annual Diesel Consumption (Litres) (Transport + DG)	32293.71
8	Annual Diesel generated units (kWh) (DG)	6559

TABLE 1: GENERAL DETAILS

DESCRIPTION OF SITE

The last five decades have witnessed the remarkable transformation in the educational status of Muslims in Kerala, supposedly the most backward in education. The driving force behind this effort has been M.E.S., the largest educational agency of the Muslim community in India having thousands of life members and hundreds of institutions. The movement started under the great leadership of late Dr. P.K. Abdul Gafoor in 1964 at Calicut, was supported by a large number of professionals and businessmen and in a short span of time, it spread to all Districts, Taluks and even to the Panchayaths in Kerala and other parts of India and abroad. As on today it is the largest Muslim service organization in the country. It has also well-established units in Middle East countries like Saudi Arabia, Qatar, Oman, Dubai, Abu Dhabi, Kuwait, etc. and still the organization is growing fast, extending its services further to reach every nook and corner of the world. MES is the largest corporate educational agency of Muslims in India, with more than 150 institutions including Medical College, Dental College, Engineering Colleges, College of Nursing, Arts and Science colleges, Training Colleges, CBSE schools, State syllabus Higher Secondary Schools and Industrial Training Centres with more than 60,000 students and around 15,000 employees. Hospitals, Orphanages, Old age homes, Special Schools for Mentally Challenged, Cultural complexes and various hostels draw up the broad canvas of the services offered and activities undertaken by the society. The idea of a college at Ponnani actually emanated from the brain of late Dr. P.K. Abdul Gafoor Sahib, while addressing a public meeting organized by M.E.S. Ponnani unit in 1967. In the keynote address, he unequivocally stated that M.E.S. was ready to start a College here at Ponnani, provided the Ponnani M.E.S. units mobilize the required land and 1 lakh rupees. It was a great source of inspiration for the energetic members of the Ponnani unit. They took it up as a challenge and managed to accomplish all the requirements within a short duration. A sprawling 32 acres of land was obtained from the government and they also raised an amount of 1.25 lakhs rupees by means of public contribution. The long-cherished dream thus became a reality when the college came into existence in 1968 under the patronage of M.E.S. President late Dr. P.K. Abdul Gafoor, Sri. E.K. Imbichi Bava and Sri. C.H. Mohammed Koya, being then the Ministers of Kerala. The college enjoys 2(f) and 12(B) status of UGC and is affiliated to University of Calicut. At present it provides higher education to more than 1400 students in five Post Graduate courses and nine Under Graduate courses. Among five Post Graduate departments, three departments are recognized as Research Centres by Calicut University. There are 69 Teaching faculties and 25 Non-teaching staff in our college. The college was re- accredited by the NAAC at A level in September 2012. Ponnani lies on the western outskirts of Malappuram district. The college is situated in Ponnani municipal area and its campus stretches to the west side of Tippu Sultan road. This is the only higher



education centre between Tirur and Guruvayoor in the coastal belt of Malappuram district. The National Highway 66, the K.S.R.T.C. bus depot and the private bus stand make commuting very easy for the students. Kuttipuram railway station is 18 kms towards northeast and Guruvayoor railway station in 29 kms towards south.

Vision

To immortalize the legendary Ponnani wisdom and tradition, whilst assimilating the ever altering spirit and ingenuity of the academic firmament.

Mission

To ensure the scholastic, social and cultural emancipation and empowerment of people of the environs especially of the fisher folk whose rights and privileges have been suppressed and trampled upon for centuries owing to the historical, political and social reasons.

Objectives

We endeavor to fulfill the fair aspirations of all stakeholders and to disseminate the fame of institution as an epitome of excellence in all walks by setting the following objectives: -

- Developing a culture of equality, secular outlook, all-inclusiveness and impartiality.
- Embracing innovative curricular, co-curricular and extracurricular activities from the globalized world.
- Setting an exceptional academic ambience ensuring the collaboration and contribution of all stakeholders.
- Promoting scientific temperament and rationale thinking as envisioned in the Constitution of India.
- Empowering the vulnerable sections of the society through committed and unswerving program.
- Providing a life-oriented education to students, making them agents of transformation for the wellbeing of the Nation.

Core Values

1. Social Equity
2. Ethical Justice
3. Civic Responsibility
4. Accountability and Transparency
5. Intellectual Integrity
6. Inclusive Employment



ENVIRONMENT AUDIT

1. OBJECTIVES

The ICC defines Environment Auditing as: “A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects.”

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user friendly and totally voluntary. The environmental awareness helps the institution to set environmental examples for the community and to educate young learners.

One of the main trust areas in the institution is Waste management. Here we can mainly divide into as activity from the college and student initiatives to the social environment.

2. WASTE MANAGEMENT

Waste is generally termed as ‘a resource at the wrong place’. The college authorities are aware of the possible methods and have installed waste management measures like biogas systems. The waste clearance measures associated with different types of wastes are briefly given below.

In an college normally three types of wastes are generated and we can divide the same as Bio degradable, Non bio degradable and E-waste.

Biodegradable wastes

Biodegradable waste includes any organic matter in waste which can be broken down into carbon dioxide, water, methane or simple organic molecules by micro-organisms and other living things by composting, aerobic digestion, anaerobic digestion or similar processes. In waste management, it also includes some inorganic materials which can be decomposed by bacteria

These materials are non-toxic to the environment and mainly include the natural substances only. Plants and animals waste, even the dead plants and animals, fruits, paper, vegetables, etc. get converted into the simpler units, which further get into the soil and are used as manures, biogas, fertilizers, compost, etc.

The biodegradable wastes are mainly from the college canteen. The bio-slurry is used as manure to the plantation.

College Canteen: It is found that around 7 to 8 kg of biodegradable food waste is available per day and is fed in to compost pit and made into compost for gardening and for feeding into agriculture and trees.

- ❖ Other wastes like those from the toilets are disposed through septic tank at locations situated away from water sources.

Here college is using portable Fiber Reinforced Plant for treating bio waste. The slurry coming from the plant is collected in drums and reused after diluting with water for agriculture and for gardens. The methane gas is used by using separate biogas stove in the canteen for heating cold water to hot water which is used for drinking and tea making.

Non-biodegradable waste

Non-recyclable wastes are collected and burned once in a month using incinerator places inside the campus itself. The recyclable wastes are sorted out into categories and supplied to the collecting units.

Materials that remain for a long time in the environment, without getting decomposed by any natural agents, also causing harm to the environment are called non-biodegradable substances. These materials are metals, plastics, bottles, glass, poly bags, chemicals, batteries, etc. But as these are readily available, convenient to use, and are of low cost, the non-biodegradable substances are more often used. But instead of returning to the environment, they become solid waste which cannot be broken down and become hazardous to the health and the environment. Hence are regarded as toxic, pollution causing and are not considered as eco-friendly.

. Many measures are taken these days, concerning the use of non-biodegradable materials. The **three 'R'** concept which says **Reduce-Recycle -Reuse** is in trend, which explains the use of the non-biodegradable materials. As we already discuss that these substances do not decompose, or dissolve easily so can be recycled and reused. And one can help in reducing this waste by instead of throwing the plastics and poly bags in the garbage; it can be put in the recycling bags to use again.



FIGURE 1: INCINERATOR

Incinerator is used for incinerating the non-biodegradable wastes which is under repair for changing of refractory bricks and for increasing the chimney height for increasing the natural draught. There is 2 incinerators is installed in the MES college one is in college and another is in Ladies hostel. The incinerator in the hostels mainly intended for the treating and incinerating sanitary napkins. The incinerator installed in the college for plastic and stationary waste incinerating.

Electronic waste: Electronic waste or e-waste describes discarded electrical or **electronic devices**. E-waste or electronic waste is created when an electronic product is discarded after the end of its useful life. The rapid expansion of technology and the consumption driven society results in the creation of a very large amount of e-waste in every minute Used electronics which are destined for refurbishment, reuse, resale, salvage recycling through material recovery, or disposal are also considered e-waste. Informal processing of e-waste in developing countries can lead to adverse human health effects and environment pollution Certain components of some electronic products contain materials that render them hazardous, depending on their condition and density.



- **Reduce** your generation of e-waste through smart procurement and good maintenance.
- **Reuse** still functioning electronic equipment by donating or selling it to someone who can still use it.
- **Recycle** those products that cannot be repaired. Computer monitors, televisions and other electronic equipment should NOT be disposed of with regular garbage, as this is illegal in California. To find an organization that will manage your electronics for recycling.

Activity: With keeping view to minimize the pollution created through the e-waste, we have carried out the scientific disposal of e-waste by two ways 1) Collection of e- wastes in e- waste box and sale it to concerned firm for its disposal. 2) Reuse of the component of unused electronic devices in laboratory

The college e-waste mainly of damaged computer parts. The auditors found that they are stored safely in a building room. These E wastes are collected by the agencies for recycling.

Laboratory Wastes: Laboratory wastes generated by conducting experiments especially in chemistry is neutralized then and their itself and after final checking of PH values feeding into common drain with sufficient water for dilution.

Other activities of college for waste management

Dustbins on the premises

In our college campus all the laboratories, cabin and corridor are having dustbins. Laboratories are having separate dustbins for dry and wet wastage. The use of dustbins maintains garbage free campus. E

No uses of plastic in canteen

Our canteen uses paper plates, newspapers, utensils to control the use of plastic on the college campus. It has helped in keeping the campus plastic free.



FIGURE 2: WASTE SEGREGATION



3. STUDENT ACTIVITIES

- ❖ **Plastic waste free Campus:** The campus is considered as plastic free and it is responsibility of each student and teacher. The overall responsibility and supervision is done by NSS unit of college. NSS unit conducting various programs in neighborhood area, schools for the plastic free area and campus of schools.
- ❖ **Gandhi Jayanthi:** On the 150th Gandhi Jayanthi, NSS volunteers conducted Swatch Bharath and plastic removal activities. The volunteers also prepared a vegetable garden inside the campus. About 30 volunteers participated in the activities



FIGURE 3: GANDHI JAYANTHI DAY CLEANING CAMP

Flood Rehabilitation activities: MES College taken care of cleaning of public areas in 3 panchayath, as a campaign as **Clean Village Green Village**.



The cleansed areas area Coaching Centre for Minority Youths, Ponnani, Holy Family High School, Kainakary, Kuttanad, Cleaning and gave support for Super chlorination under Taluk Hospital, Ponnani



NSS Volunteers Cleaning HF high School, Kainakary, Kuttanad, Alappuzha in the 'Kuttanad



Cleaning and super chlorination under the aegis of Taluk Hospital, Ponnani

Shuchithwa Mission activities: As a Clean Village and Clean Campus initiated by NSS unit from college to nearby village and in schools. NSS unit conducted various demonstration programmes, awareness classes, painting, Rally and various programmes in college and outside. In campus Weekly cleaning schedule is planned and doing continuously.



Special Programme in GMUP SCHOOL Veliancode South

MES College done many works in GMUP School and the Primary Health centre Veliancode. In the school the work undertaken by the volunteers were repair Works, Such as welding of equipment's of Play Park for children, cementing and concreting of the unfinished and damaged area of the school and Painting and Art works in the children's park and Gardening in the school at G.M. U.P. School, Veliancode and also various other parts of the Government Mappila School, Veliancode. We end up in recreating the school in much more Beauty than witnessed before and in the Primary Health Centre, veliancode initiated and volunteered in completing the Cleaning, beautification and planting of Mango saplings and installation of a vegetable garden .The mission was successfully completed and the news being telecasted by the local news channel



Cleaning in PHC of Panchayath



Cleaning and samplings and maintenance of School



Artwork in School Play area

Conclusion: Environment audit is the best way to analyse and solving the critical issues of waste management. Environment audit can add value to management approach being taken by college for identifying, collecting, segregating and processing of waste generated in the college campus. By analysing the waste generation in each segment such as biodegradable, non-degradable, R waste etc. gave an indication of waste generation and thus put control for for the same to reduce the environmental impacts in due course.

During audit and conversations with the college team we observed that MES Ponnani done various approaches in the past few years to performing well to sustainable environment. Even though there is space for further improvement which will give in the executive summary as suggestions.




CONCLUSION

Environment audit is the best way to analyse and solving the critical issues of waste management. Environment audit can add value to management approach being taken by college for identifying, collecting, segregating and processing of waste generated in the college campus. By analysing the waste generation in each segment such as biodegradable, non-degradable, R waste etc. gave an indication of waste generation and thus put control for the same to reduce the environmental impacts in due course.

The findings in the report shows that college perform fairly well in waste management issues and taken considerable efforts in a responsible manner. During audit and the conversations with the college team, we observed that MES Ponnani done various approaches in the past few years to performing well to sustainable environment. Even though there is space for further improvement that mentioned in the executive summary.




ANNEXURE - 1

 **BUREAU OF ENERGY EFFICIENCY**

Examination Registration No.: **EA- 7597**

Accreditation Registration No.: **AEA-0275**



Certificate of Accreditation

This is to certify that Mr./Ms..... **Santhosh. A**having its trade/registered office at **Kerala** has been given accreditation as accredited energy auditor. The certificate shall be effective from ...**2nd**... day of **November, 2017**.....


The certificate is subject to the provisions of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

This certificate shall be valid until it is cancelled under regulation 9 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

On cancellation, the certificate of accreditation shall be surrendered to the Bureau within fifteen days from the date of receipt of order of cancellation.

Your name has been entered at AEA No. **0275**..... in the register of list of accredited energy auditors. Your name shall be liable to be struck out on the grounds specified in regulation 8 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

Given under the seal of the Bureau of Energy Efficiency, Ministry of Power, this **12th** day of **February, 2018**


Secretary,
Bureau of Energy Efficiency
New Delhi



Energy Management Centre - Kerala
(Department of Power, Govt of Kerala)

CERTIFICATE OF EMPANELMENT

This is to certify that **M/s. Athul Energy Consultants Pvt Ltd** (4/2, Capital Legend, Korapath Lane, Round North, Thrissur – 680 020) is empanelled as Energy Audit firm in Energy Management Centre Kerala to conduct mandatory energy audit as per Government of Kerala G.O (Rt) No.2/2011/PD dated 01.01.2011.

Empanelment No:
EMCEEA- 0811F-2

Scope/Area	Building	Industry -Electrical	Industry Thermal
	Yes	Yes	Yes

This empanelment is valid up to 20th December 2020

Issuing Date: 01/01/2018

Place: Thiruvananthapuram

Director,
Energy Management Centre Kerala



CERTIFICATE



Ministry of New and Renewable Energy
Government of India



GRIHA Council



The Energy and Resources Institute

This is to certify that

Ashok K M P

of

Athul Energy Consultants Pvt Ltd, Thrissur

has qualified as

GRIHA Certified Professional

on

01st August 2018

Sanjay Seth
Chief Executive Officer
GRIHA Council

Note: This certification is valid for a period of 2 years from the date of qualification (exam).



http://community.grihaindia.org/blocks/verify_certificate/index.php?certnumber=fyiPq2Q5JA

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