GREEN AUDIT REPORT

2018-2019

ADITYA ENGINEERING COLLEGE (AEC)

Prepared BY

Global Green Solutionz
Greening the globe

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Acknowledgement

Global Green Solutionz (GGS) is thankful to the management and staff of Aditya Engineering College (AEC) for awarding Green Audit for their college at Surampalem, East Godavari, Andhra Pradesh.

The Study team members of Global Green Solutionz would sincerely like to thank all the Department Heads and support staff members of Aditya Engineering College (AEC) for providing the necessary support in order complete the green audit.

For Global Green Solutionz

M. Srikanth

GLOBAL GREEN SOLUTIONZ HYDERABAD

Srikanth Meesa,
CEO, Global Green Solutionz

INTRODUCTION

The term “Green” means eco-friendly or not damaging the environment. This can acronymic ally is called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN).Green audit was initiated in the beginning of 1970s with the motive of inspecting the work conducted with in the organizations whose exercises can cause risks to the health of inhabitants and the environment. It exposes the authenticity of the proclamations made by multi-national companies, armies and national governments with the concern of health issues as the consequence of environmental pollution Green Audit is one of the systematic audits to assess the impact of the institutions on the environment with respect to land, air, water, solid waste, noise etc. In order to conduct the green audit a systematic identification, recording, reporting and analysis is essential. The objective is to analyze environmental practices within and outside of the concerned facilities, which will have an impact on the eco-friendly ambience. Green audit is one of the useful tools for a college to determine how and where they are using the vital resources such as energy, water etc. Thus, it provides the opportunity to identify the potential options to conserve these precious natural resources. the college can then consider how to implement changes and make savings. It also includes the determination of various types of wastes and how to manage them effectively without polluting the environment. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding and encourages them to cultivate the green practices in the campus. It is the need of the hour for the colleges to evaluate its own contributions toward a sustainable future. Environmental sustainability has become one of the pressing issues for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological impacts. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric carbon-di-oxide from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report.

OBJECTIVES:

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. But the auditing of this non-scholastic effort of the college has not been documented.

Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out Green Audit are:

To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use of the campus

To map the Geographical Location of the college

To record the meteorological parameter of Surampalem where college is situated.

To estimate the Energy and water requirements of the college

To document the Waste disposal system

To document the ambient environmental condition of air, water and noise of the college

To introduce and aware students to real concerns of environment and its Sustainability.

METHODOLOGY:

It is the duty of the originations to carry out the green audits of their on-going process for various reasons such as; to make sure whether they are performing in accordance with relevant rules and regulations, to improve the procedure and ability of materials, to analyze the potential duties and to determine a way in which can lower the costs and add to the revenue. Through, green audit, one gets a direction as to how to improve the condition of the environment and there are various factors that have determined the growth of carrying the green audit.

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

The Intention of Green Audit is to upgrade the environment condition in and around the institutes, colleges, companies and other organizations. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn it into better environmentally friendly institute.

Step Under Green Audit:

Plan the audit: Green auditing related data was collected during August 2019

Select the audit team: AEC has hired Global Green Solutionz (GGS) to conduct the green audit. GGS has appointed a is well qualified team that has good knowledge in the field of environment.

Schedule the audit facility: The audit facility is the AEC campus including the connected hostels.

Acquire the background information: GGS team has interviewed the appointed green audit coordinators from AEC College. They have submitted the relevant data related to landscaping, built up area, energy and water

related data which are part of the report.

Benefits of Green Audit:

To Shield the environment

To recognize the cost saving methods through waste minimizing and managing To point out the prevailing and forthcoming complications

Authenticate conformity with implemented laws

Empower the organizations to frame the better environmental performance It portrays the good image of the institution which helps building better relationships with group of stakeholders

ABOUT THE COLLEGE

Aditya Engineering College was established in the academic year 2001-02 under the aegis of Aditya Academy, Kakinada with the approval of AICTE and Affiliated to JNTU with an intake of 180 in three UG Courses in Engineering & Technology.

The College is located in an eco-friendly area of 180 acres with thick greenery at Surampalem, Gandepalli Mandal, East Godavari District, Andhra Pradesh. The College is 15 KM away from Samalkot Railway Station on Howrah-Chennai Railway line in South Central Railway. The College is 35 Km away from Kakinada and Rajahmundry on ADB Road.

The College has three academic blocks with a total carpet area of 56,479Sq. Mts. apart from two boys hostels and one girls hostel building hostel. The particulars of academic buildings and the departments / offices accommodated are as follows.

S.No	Building Name	Department/Office
1	Cotton Bhavan	Administrative Office, Accounts, Admission Office, ECE, Examination Cell, Central Library.
2	K. L. Rao Bhavan	Mechanical, Electrical, Petroleum Technology, Mining Engineering and Agricultural Engineering
3	Bill Gates Bhavan	CSE, IT, H&BS, Civil, AI&ML
4	Abdul Kalam Bhavan	MCA,MBA, IMBA, M.Tech & Management Sciences

The college offers 10 UG and 10 PG programmes in engineering, MCA, MBA, and IMBA (Integrated) with 20 years of rich standing in the educational era. Besides, the college has added many feathers in its cap which include AICTE-ECI-ISTE Chhatra Vishwakarma Award, Utkrist Sansthan Vishwakarma Award, Swachh Campus ranking, AAA+ Grade by Careers 360, South India 4th rank by Digital Mailers, South India 6th rank by Silicon India, 13th rank out of top 25 engineering colleges by 4Ps, a niche in Asia top 100 colleges by WCRC leaders, Best Placement Award by ASSOCHAM, All India 98th rank-DQ CMR top T-School survey by DATA Quest and 13th position in Top 20 colleges of India by the Sunday Indian. These districts recognition speak volumes of

the institute's objective to promote engineering excellence. The total student strength is 4869 with faculty strength of 308 thus giving rise to healthy faculty student ratio.

It is approved by AICTE, recognized by Govt. of Andhra Pradesh, permanently affiliated to Jawaharlal Nehru Technological University Kakinada (JNTUK), and is accredited by National Assessment and Accreditation Council (NAAC) with 'A' Grade. The college also received UGC recognition under Sections 2(f) and 12 (B) of the UGC Act.

Under Graduate Courses:

Civil engineering

Electrical and Electronics Engineering

Mechanical Engineering

Electronics and Communication Engineering

Computer Science and Engineering

Information Technology

Petroleum Technology

Mining Engineering

Agriculture Engineering

Artificial Intelligence and Machine Learning

Post Graduate Courses:

M.Tech VLSI Design

M.Tech Embedded Systems

M.Tech Computer Science & Engineering

M.Tech Structural Engineering

M.Tech Power Electronics & Drives

M.Tech Thermal Engineering

M.Tech Petroleum Engineering

Master of Business Administration

Integrated Master of Business Administration

Master of Computer Applications

No. of students – studying all branches and classes :

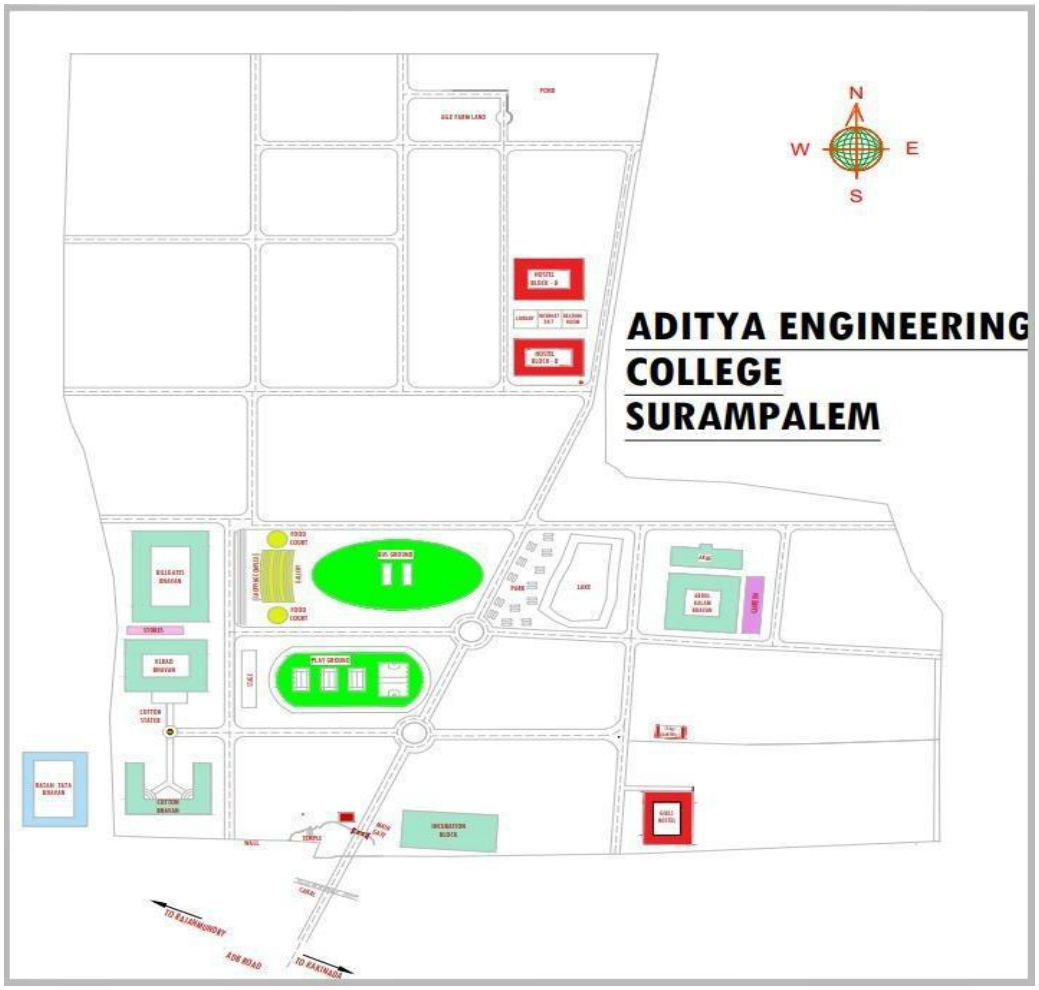
S.No	Course	No. of Students
1	B.Tech	4396
2	M.Tech	109
3	MBA	107
4	MCA	119
5	Any other courses	138
Total		**4869**

LAND USE ANALYSIS, ADITYA ENGINEERING COLLEGE, SURAMPALEM, ANDHRA PRADESH (2019)

GENERAL OVERVIEW OF THE CONCEPT OF LANDUSE:

Land use involves the management and modification of natural environment or wilderness into built environment such as settlements and semi-natural habitats such as arable fields, pastures, and managed woods. It refers the activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape (Howarth 1981).

The collection of remotely sensed data facilitates the synoptic analyses of earth system, functions, patterning, and change in the local, regional as well as at global scales over time.Satellite imagery particularly is a valuable tool for generating land use map using google maps.



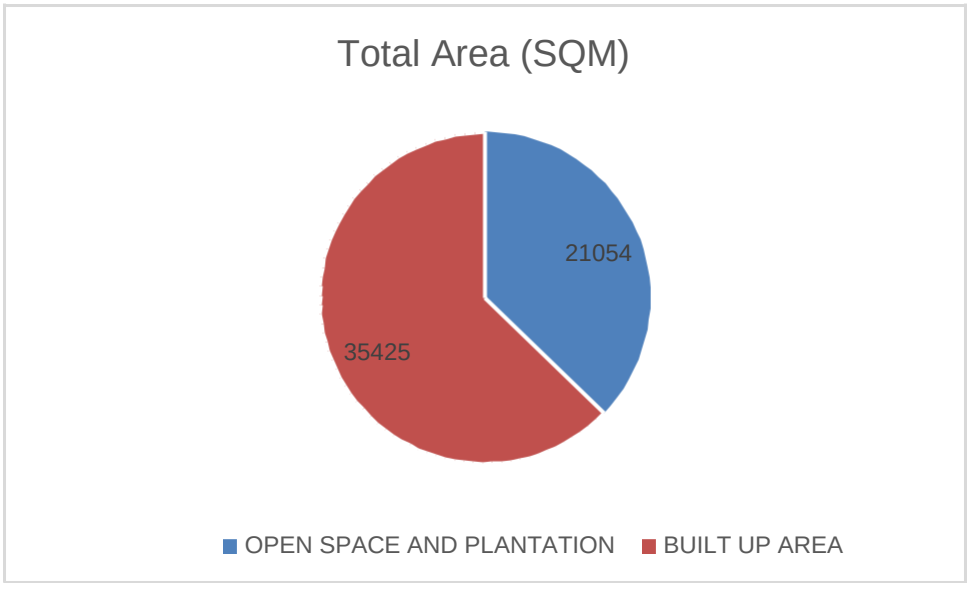
Site layout map of Aditya Engineering College (AEC)

METHODOLOGY ADOPTED FOR LAND USE MAPPING

Three types of data that are GPS points, field survey data and Google earth data for Georeferencing have been used in this study. Land use map of the study area have been prepared using the above three types of data with the help of google maps.

LAND USE DATA OF AEC, Surampalem

CATEGORIES OF LAND USE	AREA IN SQ METRES
OPEN SPACE AND PLANTATION	21054
BUILT UP AREA	35425
TOTAL AREA	**56479**

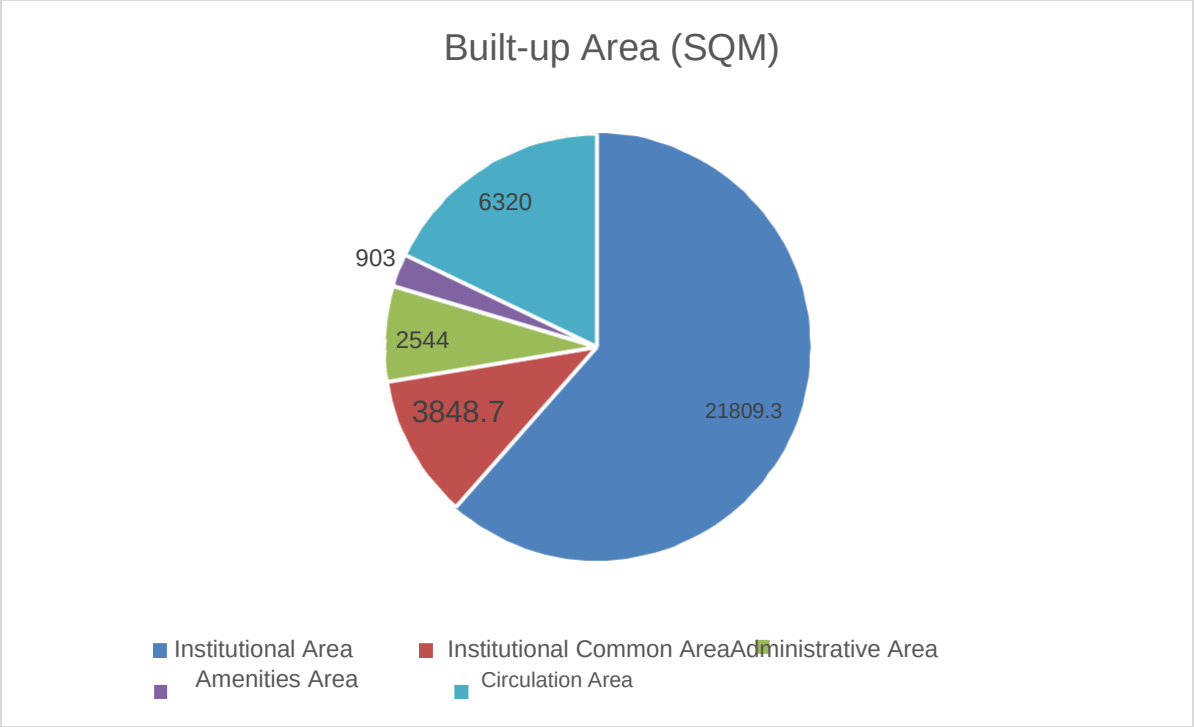


Green Audit Report of Aditya Engineering College -2018-19

The total area of AEC College is 56,479 sq. meters out of which the built-up area is 62.8% (i.e.,35425sq. meters) and open space area is 37.2% (i.e.,21054 sq.meters).

LAND USE (BUILT UP AREA) ANALYSIS:

CATEGORIES OF LAND USE (BUILT UP AREA)	AREA IN SQ METRES
Institutional Area	21809.3
Institutional Common Area	3848.7
Administrative Area	2544
Amenities Area	903
Circulation Area	6320
TOTAL AREA	**35425**



The institutional area sums up to 21809 sq. meters, followed by circulation area 6320 Sq. meters. Institutional common area is 3848.7 sq. m and administrative Area is 2544 sq. meters. The amenities occupy 902 sq meters.

AEC College, which was established in the year 2001-02, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that about 37 % of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

TREE DIVERSITY OF AEC, Surampalem

AEC College is within the geo-position between latitude 17.0895 N, and longitude 82.0667 Eat Surampalem,30 Km from Kakinada city India. It encompasses an area of about 180 acres of greenery in Surampalem. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmes organized by the college management and have become an integral part of the college.

The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. Thus, the college has been playing a significant role in maintaining the environment and its surrounding areas.

AEC campus is having total green area of **21054 m^2**

S.No.	component	Area in m_2
1	Lawn	5585

2	Tree cover	6767
3	Potted plants	1426
4	Shrubs and hedges	7276
	Total Green area	**21054**

Below stated information is provided by the college management team:

AEC campus has a beautiful garden area. The garden has different sections in which specific types of plants are planted with respect to their medicinal importance and Vedic reference. Boards are displayed for each section and plants names. Sprinkler system is provided in herbal garden.

Large trees and potted plants were seen in the campus. Plantation improves aesthetics and helps as buffer in reducing noise level, maintaining temperatures of the area. As informed by the garden supervisor, around 80 trees are present in the campus.

Garden is managed by gardener. Organic fertilizers and pesticides are used for plants if necessary.

ELECTRICAL POWER CONSUMPTION AT ADITYA ENGINEERING COLLEGE

Transformer capacity : 500KV

Diesel generator, if any and capacity : 160KV

No. of pumps – 25 Borewell and sump pumps –10+15 HPs -10

Borewell	10
Sump pump	15

No. of building – Names with no. of rooms in each building

S.No.	Name of the Building	No. of Rooms
1	Cotton Bhavan	40
2	KL Rao Bhavan	73
3	Bill Gates Bhavan	91
4	Abdul kalam Bhavan	59

Hostel details, no. of rooms, no. of students staying – inventory of lights and Fans

S.No	Hostel Block	Rooms	Students	Fans	C.F.L	Tube Lights	LED
1.	**B**	**152**	**291**	**324**	**-**	**317**	**331**
2.	**D**	**255**	**160**	**335**	**-**	**336**	**374**

Building wise inventory details

Type of tube lights, wattage, no. of fans, no. of ACs.

S.No.	Name of the Building	Fans each 50Watt	C.F.L 10Watt	Tube Lights 20Watt	AC 1.5 Ton
1	Cotton Bhavan	**269**	**62**	**161**	**19**
2	KL Rao Bhavan	**435**	**44**	**324**	**5**
3	Bill Gates Bhavan	**587**	**21**	**376**	**22**
4	Abdul kalam Bhavan	**384**	**83**	**244**	**2**

Roof top solar power plant, if any – capacity, no. of units generated, consumption and export for last 12 months (April 2018 to March 2019)

Capacity : 500 KW

No. of units generated: 573986 Units

Consumption : 375614 Units

Export : 198372 Units

Renewable energy: There is a Rooftop solar PV System of 500 KW capacity has been installed to cater to the energy needs of the college.

ADITYA ENGINEERING COLLEGE
An Autonomous Institution
Approved by AICTE • Permanently Affiliated to JNTUK • Accredited by NAAC with 'A' Grade
Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956
Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

SOLAR & POWER CONSUMED UNITS AND AMOUNT DETAILS (YEAR 2019)

2019,SC.NO. RJY 639 , ADITYA EDUCATIONAL ACADEMY. CMD:260 KVA, SOLAR CAPACITY :500 KW

APSEB & SOLAR DETAILS																SOLAR		
S.NO	MONTH	APSEB CONSUMED UNITS (A)	BILL UNITS	BILL AMOUNT	POOLED COST ADJ.(x)	SOLAR EXPORT UNITS (B)	EXCESS/ LESS SOLAR UNITS (B-A)	APP.COST OF SOLAR UNITS (x/B)	ACTUAL GENERATE UNITS (C)	PRESENT SOLAR GENERATE UNITS (D)	COLLEGE SOLAR CONSUMPTION E= (D-B)	TOTAL COLLEGE UNITS CONSUMPTION (A+E)	RMD KVA	BILL KVA	LOSS UNITS (C-D)	To apseb exess. Solar amount	SOLAR GENERATED UNITS	SOLAR TO EXPORT APSEB	SOLAR COLLEGE CONSUMED UNITS
1	JAN	16896	4600	50744	79138	25824	8928	8.9	67890	52922	27098	43994	103	184	14968		52922	25824	**27098**
2	FEB	20618	4600	109266	22294	19830	-788	-28.3	63510	58944	39114	59732	109	184	4566		58944	19830	**39114**
3	MAR	25674	6128	144686	0	19546	-6128	0.0	67890	45856	26310	51984	109	184	22034		45856	19546	**26310**
4	APR	23319	4600	35796	12548	20860	-2459	-5.1	65700	39879	19019	42338	143	184	25821		39879	20860	**19019**
5	MAY	24577	7933	167240	0	16644	-7933	0.0	67890	53495	36851	61428	118	184	14395		53495	16644	**36851**
6	JUN	26413	16771	236239	0	9642	-16771	0.0	65700	37971	28329	54742	172	184	27729		37971	9642	**28329**
7	JUL	62794	55398	551254	0	7397	-55397	0.0	67890	41091	33694	96488	224	224	26799		41091	7397	**33694**
8	AUG	61340	46311	489211	0	14410	-46930	0.0	67890	53241	38831	100171	229	229	14649		53241	14410	**38831**
9	SEP	80055	72347	740447	0	7708	-72347	0.0	65700	39358	31650	111705	299	299	26342		39358	7708	**31650**
10	OCT	46740	29013	346112	0	17727	-29013	0.0	67890	46041	28314	75054	229	229	21849		46041	17727	**28314**
11	NOV	39504	19476	262908	0	20028	-19476	0.0	65700	55294	35266	74770	159	208	10406		55294	20028	**35266**
12	DEC	41644	22889	311543	0	18756	-22888	0.0	67890	49894	31138	72782	254	254	17996		49894	18756	**31138**
		469574	**290066**	**3445446**		**198372**			**801540**	**573986**	**375614**	**845188**			**227554**		**573986**	**198372**	**375614**

K. Veeraju.
ELECTRICAL INCHARGE

HOD

PRINCIPAL

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

AIR QUALITY IN KAKINADA: AEC

The climate of AEC college campus located at Surampalem near Kakinada city outskirts. It was noticed the college is away from the bustling city Kakinada and the campus is fully green with many trees and plantations.

Air Quality determination
Satisfactory: Air quality index (OVERALL62) in **Rajamahendravaram weather station (34 km from Surampalem), India**

The air quality index is found 142 as per the publicly available data for the month December 2019. This indicates moderate air quality. However, as the AEC campus is surrounded by greenery and plantation the air quality is of much better quality.

Indoor Air Quality:

The interviews with the college staff have revealed the below:

During day- time Air Quality Index (AQI) of 45-60 because of campus greenery In kitchens present in Cafeteria, LPG is used for cooking which is a clean fuel.

In classrooms the mode of ventilation is natural draft (through windows) and is enhanced by fans. Large windows and cross-ventilation are observed in corridors. Air conditioners are used in some offices, computer laboratories and computer server room.

Exhaust fans are provided in chemistry laboratory and all kitchens.

WATER ANALYSIS REPORT OF AEC

AEC consumes the ground water stored in the overhead tanks. The campus blocks have their respective overhead tanks to meet the water needs of the institute. Also, the B and D hostels have the overhead tanks.

Total water consumption of the institution is estimated to be at 60,000 liters per day approximately.

RO PLANT

Reverse osmosis water is available for drinking on the campus. There are 3 units of R.O. plant, each with a treatment capacity of 2000 liters per hour.
Sump storage capacity of the plant is 1,20,000 liters.

USAGE OF R.O. REJECT

R.O. plant water reject is used for watering plants in the institution and hostels.

Green audit team noticed that the drinking water quality was found good and potable.

Green audit team has noticed that there is a water harvesting pit where the RO reject is used to recharge the ground water. Approximately 40% of the water entering the RO water gets rejected which is used to recharge the ground water.

Wastewater: Wastewater is mainly generated from toilet flushing and kitchens. Wastewater generated from academic blocks as well as hostels is collected in septic tanks and passed to surrounding trees and plants through canals.

Rain water harvesting

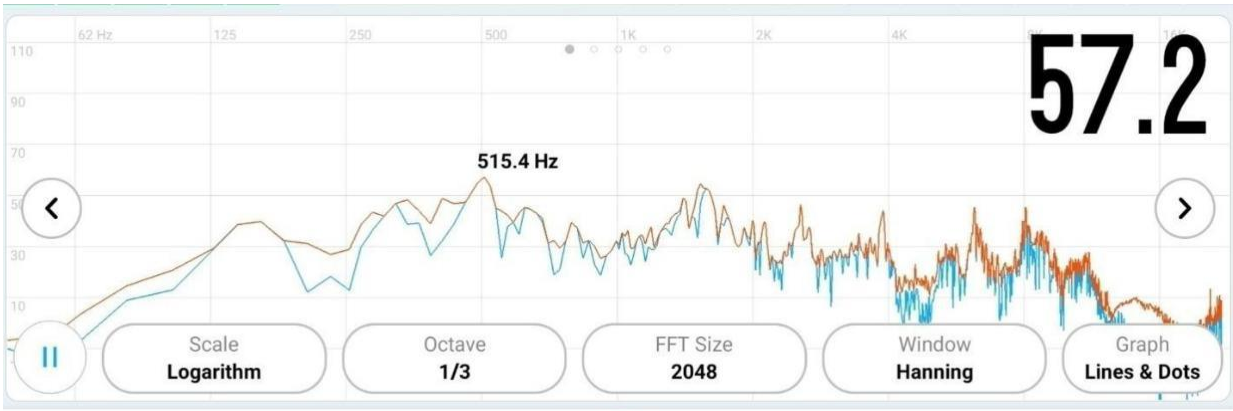
Rainwater collected from all buildings is gathered in the building blocks interior gardens. Some rainwater is directly absorbed into the ground, while some is used for vegetation development. The majority of the precipitated water was channelled to the inner garden area's outlet, where it entered the combined drainage system. The drained water was sent to the campus's open ponds, while precipitation that fell near the ponds was also transported through drains and gathered in the ponds.

The rainwater is fed into the surface pond nearby the college. The picture of the pond is provided below.

The pond water is used for gardening needs of the college.

NOISE LEVEL IN THE SURROUNDING OF AEC.

Institute site visit observations, revealed that the noise levels were found to be satisfactory and are within the permissible limits.



WASTE MANAGEMENT AT AEC

Management of solid waste is an important driver in Green Audit. Solid waste not properly managed leads to the degradation of the environment which, in turn, affects the flora and fauna. Keeping this in mind, the College has been strictly implementing scientific solid waste management to maintain the green status of the campus.

The present Prime Minister of India Sri Narendra Modi launched 'Swachh Bharat Abhiyan'(Clean lndia Mission) on 2nd October, 2014. In this mission, the proper use of dust/waste bins is one of the major priorities. For the implementation of this mission, collective mass effort is necessary. For proper segregation and management. proper use of waste bins is the only solution for waste management purpose in the college campuses.

Waste Management includes the management and handling of all types of wastes. This waste types include the following:

Wet Waste: Wet waste includes the organic waste such a food waste, kitchen waste after peeling the vegetables and garden waste etc.

Dry Waste: Dry waste can be categorized into different wastes such as plastic waste, E- Waste, bio-medical waste, Construction & demolition waste and hazardous waste.

Paper Waste:

In order to reduce the paper waste, the management started digitization. It has implemented good practices such as prints and photocopies are taken on both sides of the pages. Further, the campus has E-book facility since 2019 all the book are available on the college website for the students at any time. Further, records of books and e-books are well kept and were available for review.

Internal notices and communications are through E-mail/SMS. AEC has Learning Management System (LMS) where notices are sent, exam results are displayed and attendance is recorded digitally.

Other good practices followed by AEC are provided below:

- Biometric attendance is provided for AEC staff.
- Paper notices are displayed on the notice boards. The dissertation reports, journals, and answer papers are stored as per the University rules.
- Approximately 10 kg paper waste is expected to be generated by AEC each year. Old papers and books are given to the recyclers.
- AEC encourage students to use eco-friendly material and recycle old papers/ scrap for decoration purpose during college festivals.

Solid Waste:

Being an institute with residential facility, considerable quantity of wet (food/ organic) waste is generated in the premises.

Below information is obtained from the college:

Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. It is a great concern relating to environment and society Aditya Engineering College took major steps to manage the waste to protect and create a clean and pleasant environment. The departments as well as administrative offices generates some waste and put in two bins for wet waste and dry waste kept in departments and corridors. Each building has several dust bins from where the housekeeping staff collects the trash. In the same manner waste from canteens, residential quarters, Hostel and guest houses is collected. The collected waste is dumped in big containers (wet and dry) by the housekeeping staffs regularly. The whole waste is then segregated and then the waste that can be used for composting is dumped for vermicomposting. Vermicomposting unit converts the biodegradable waste to fertilizer. This fertilizer is used to promote the lemon orchard located in the AEC campus. AEC discourages use of plastic; particularly single use plastics in campus. Paper wastes from departments, Library, Administrative offices, Hostels, are disposed through vendors. The wastes are properly stacked in designated place and later disposed through vendors for proper waste management.

E-Waste:

Being one of the progressive colleges in India, AEC has also moved to on-line learning system through it's e-courses. This includes classrooms, library, internal mails etc. All the classrooms are digitized. It also has an E-library, student & staff portal for academic work, biometric attendance system for staff, etc.

Electronic goods are put to optimum use; the minor repairs are set right by the Laboratory assistants and teaching staff; and the major repairs are handled by the Technical Assistant and are reused. AEC has entered MoU with ELECTROPRO SYSTEMS which buys our damaged computers and other non-reparable e-waste and issues a recycling certificate. ELECTROPRO procures the equipment which cannot be refurbished for re-use is dismantled and remanufactured into raw materials (i.e. metals, plastics, glass) to be marketed as recyclable. The waste compact discs and other disposable non-hazardous items are used by students for decoration during college fests as a creative means of showcasing the waste management practice that has been induced in the minds of the students.

Old computers are given to a Local vendor (Pavan computers) in Kakinada with whom MOU was made for AMC, while purchasing new computers at discounted price.

Transportation

The College is 15 KM away from Samalkot Railway Station on Howrah-Chennai Railway line in South Central Railway. The College is 35 Km away from Kakinada and Rajahmundry on ADB Road. AEC provides buses and cars for transportation for students/ staff. Most of the staff pool buses and cars and a few staff members travel by private vehicles. AEC management encourage students and staff to use the college buses (60) or public transport system to reduce carbon emissions.

Campus uses three 72V 5 KW electrical vehicles with 12 seating capacity. Two 48V 5KWelectrical vehicle with 10 seating capacity are is also used on the campus among which one is a student project. Also, a 48V 1KW vehicle is used with 4seating capacity.

Green Initiatives

Due to minimum consideration for environment & sustainability, the world is facing problems of ozone depletion, climate change, water scarcity and sustainable resource management. AEC organizes guest lectures on Environmental conservation, biodiversity, etc. every year.

AEC has a demonstrated consistent commitment towards nature and environment. AEC started Haritha eco green club, which offers wide spectrum of environmental and nature activities and platforms to enhance awareness and exhibit the relationship with nature. Various activities organized by ‘Haritha ‘involved guest lectures, nature visits, workshops and competitions.

NSS groups of AEC organized the green activities and awareness campaigns such as plantation camps in college, rally in nearby villages.

Recommendations/ Suggestions

For Indoor Air Quality

- Indoor plants can be chosen in such a way that they give aesthetic appearance as well as health benefits.
- Information on sources, impacts and mitigation of indoor air pollution to be displayed within AEC for increasing awareness about indoor air pollution. E.g. Signage can be put in chemistry laboratory for handling fuming chemicals.

Water Conservation

- Provide information on water usage and savings to students/ staff through notices, screen savers in computer laboratories, and encourage reduction/ wastage of water.
- Replace all old water faucets with water saving faucets, aerator taps, jet sprays etc. Installation of such faucets can save water and help in minimizing the water footprint.
- Dual flushing system can be installed for toilet flushing, with appropriate instructions, which will save considerable amount of water.
- Grey water/ sewage recycling system can be installed for flushing toilets. This will reduce the fresh water footprint.
- Signage/ posters should be posted in high water consumption areas in Academic Blocks to increase awareness regarding water conservation.
- As the source of water is borewell, AEC can install water meter on borewell line to monitor daily borewell withdrawal.
- Implementation of the STP could reduce the dependency on the ground water