

CERTIFICATE

ENERFUTURE PVT LTD

Verified and Certified that



**A.B.M.S. PARISHAD'S
SHRI SHAHU MANDIR MAHAVIDYALAYA**

Laxmi Nagar, Parvati Ramana, Pune, Maharashtra 411009

E-mail Id: principalsmmpune9@gmail.com

Website: <https://www.shahucollegepune.org/>

Contact Number: 020-24221424

has carried out
Green/Environment Audit
as per guidelines laid down in the
Indian Standards and Codes
in 2020-21.



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College Name : **Shri Shahu Mandir Mahavidyalaya, Pune**

Date of Establishment : 1960

Address : Parvati Ramana, Pune 411009, Maharashtra, India.

Contact Details : 020-24221424, Principal_ssmmpune@yahoo.co.in

Scope of audit : Green Audit for College

Number of staff : Total : 99, Male : 60, Female : 33

Number of Students : Male : 2085, Female 940, Total – 3025

Courses offered : B.A, B.B.A, B.Com, B.B.A (C.A), M.A. M.Com

College key members : Principal : Dr. Zeenat Khan
Dr. Vilas Patil
Dr. Pravin P. Jadhav
Mr. Sudam Kamble – Registrar.

Introduction

Green Campuses can have tremendous benefits, both tangible and intangible. The most tangible benefits are the reduction in water and anergy consumption right from day on of occupancy. The energy savings could range from 20-30% and water savings around 30-50%. Intangible benefits of green campus include health & well-being of the occupants, enhancing air quality & promoting biodiversity, safety benefits and conservation of scarce national resources.

FOCUS AREAS :

- A. Solid Waste and Recycling
- B. Electricity and Natural Gas Use
- C. Water and Waste Water Management
- D. Wetlands, Store water Management and Campus Ground Management
- E. Emissions and Air Quality
- F. Food Services
- G. Hazardous Waste management
- H. E-waste management
- I. Use of renewable energy.

BUILDING SURVEY:

1. Total campus area : 272100 square meters
2. Building : Main building – 2238 square meters, Library – 1131 square meters.
3. Ground Area : 19736 square meters.
4. Green Area : 72775 square meters.
5. Road/Paved Area : 11973 square meters
6. Terrace Area : 1123 square meters
7. Impervious area : 13096 square meters. Pervious area : 92511 square meters.
8. Number of Class Rooms : 23
9. Number of Computer Laboratories : 3
10. Water Filters with aqua guard : 4
11. Water coolers : 4
12. Number of Fire Extinguishers: 4
13. Classrooms with sufficient cross ventilation and light.
14. Laboratories with safety instructions and measures.
15. Number of Ac's : 2
16. Emergency contact number displayed.

SOLID WASTE :

1. Types – Paper, Plastic, Metals, Glass, rubber, books, food waste in canteen and E-Waste.
2. Paper consumption : Re use of paper - system is evident. Both sides of paper are used.
3. Regular activities digitally monitored.
4. Garbage : segregated into wet and dry centrally in campus. Plastic waste collected in special bins and handed over to PMC
5. E-book system is used. Digital Library.
6. Canteen food waste collected by PMC for use in power generation and plant liter disposed by composting. Vermiculture pit recommended.

E-WASTE MANAGEMENT :

1. Disposal of E-wastes, Non-working computers, monitors and printers.
2. It is collected in a store and is to be handed over to MPCB approved agency.
3. Old batteries are replaced by buy back scheme with specific vendor.

ELECTRICITY AND GAS USAGE:

- Gas Usage in Canteen.
- Average Monthly electricity Consumption 1700 kwh.

Halogen and Sodium vapor street lights

Also, following suggestions are made for energy conservation:

- All computers have to be set for power save mode for switching off screen if not used for 15 minutes and hibernate if not used for more than 60 minutes.
- Students may be educated towards saving of electricity by displaying messages in the classroom and common public area for switching off lights, fans and computers when not required.
- Energy audit conducted. Separate report generated.

USE OF RENEWABLE ENERGY:

Existing 10 Kw solar PV system.

present contribution of renewable energy sources to meet the power requirement:

$$\frac{\text{Power requirement met by renewable energy sources}}{\text{Total Power Requirement}} * 100$$

$$= 65\%$$

WATER AND WASTE WATER:

1. Sources of Water supply : PMC Supply & well.
2. Total Number of water tanks: 3
Overhead tanks 3 of 2500 liters capacity each.
3. All tanks are cleaned twice in a year by External agency. Records available.
4. Waste water management : PMC
5. Drinking water testing done 3 times in a year.
6. Water Leakage: Regular checking is done, in house staff available to rectify leakages.
7. Number of washrooms : Total : 12
Male Toilet Blocks : 6 Female Toilet Blocks : 6.
8. Rain Water harvesting Potential during Monsoon. 786100 liters, Considering the Average rainfall of the region as 700 mm in year.

AIR QUALITY MONITORING :

1. PUC – PUC is mandatory for the Vehicles coming in the campus. PUC camp conducted every year.
2. Awareness done for students.
3. VOC/NOC VOC based – Apparent use of Non-VOC water based paints.

FOOD SERVICES:

1. Segregation of wet and dry garbage done.
2. Food Waste to be disposed in Vermiculture pit.
3. Food License and shop act license available with Canteen Operator.
4. Hygiene training conducted check list followed. Pest control done.

EFFORTS FOR CARBON NEUTRALITY : Tree List**TREES**

Sr. No.	Local Name of the tree	Scientific Name of the tree	No. of Trees
1.	Bottle Palm	Roystonea regia	34
2.	Pilmohar	Peltophorum pterocarpum	15
3.	Rain Tree	Samanea Saman	10
4.	Pimpal	Ficus religiosa	5
5.	Eucalyptus	Eucalyptus cetriflora	10
6.	Kassod tree	Cassia Siamia	7
7.	Akashneem	Millingtonia hortensis	5
8.	Mango	Mangifera indica	10
9.	Silveroak	Grevillea robusta	6
10.	Ashok	Polyalthia longifolia	25
11.	Sita Ashok	Sarraca Indica	3
12.	Suru	Casuarina equisetifolia	6
13.	Red Cottan Tree	Bombax ceiba	2
14.	X'mas tree	Arocarriya cookki	1
15.	Gulmohar	Delonex regia	15
16.	Umbar	Ficus glomarata	4
17.	Jackfruit	Artocarpus heterophyllus	2
18.	jamun	Syzygium cumini	3
19.	Chikku	manilkara Sapota	1
20.	Tamarind	Tamarindus indiaca	2
21.	Coconut	Coccus nucifera	6
22.	Almond (Desi)	Terminalia catappa	1
23.	Bamboo	Bambusa Vulgaris	3
24.	Rubber Tree	Ficus elastica	1
25.	Banyan Tree	Ficus benghalensis	7
26.	Pomegranate	Punica granatum	1
27.	Neem	Azadiracta Indica	9
28.	Bitti	Thevetia peruviana	25
29.	Ramphal	Annona reticulata	3
30.	Ficus	Ficus benzamine	15
31.	Soanchoffa	Michelia Champaca	3
32.	Devanchan	Bauhinia purpuria	3
33.	Cypress	Cupressus Sempervirens	3
34.	Fish tail palm	Caryota urens	2
35.	Mahogany	Swietania Mahogani	1
36.	Shankasur tree	Caesalpinia pulcherima	3
37.	Areca palm	Dypsis lutescens	200
38.	Areca nut	Areca catechu	25
39.	Shirish	Albizzia lebbeck	1
40.	Fountain Tree	Spathodia companulata	3
41.	Subabul	Leucaena leucocephala	75
42.	Gliricidia	Gliriciddia maculate	2010
43.	Khair	Sengalia catechu	3

44.	Chenduphal	Parkia biglandulosa	5
45.	Saptaparni	Alstonia Scholaris	1
46.	Khya	Khaya Senegalensis	5
47.	Amaltas	Cassia Fistula	3
48.	Teakwood	Techona grandis	25
49.	Babul	Acacia Arabica	2
50.	Gondhni	Cordia Wallichii	2
51.	Bartondi	Morinda Citrifolia	2
52.	Neelmohar	Jacaranda Mimosaefolia	2
53.	Xmass tree	Arocarriya cokki	1
54.	Putravanti	Putranjiva roxburghii	5
55.	Silver oak	Grevillea robusta	5
56.	Chandan	Santalum album	5
57.	Shirish	Albizzia lebbeck	2
58.	Karanj	Pongamia glabrra	8
59.	Australian Babhul	Acacia quiculiiformi	5
60.	Audumbar	Ficus glomerate	7
61.	amla	Phyllanthus imblica	1
62.	Ber	Ziziphus mauritiana	3
63.	Sitaphal	Announa squmosa	5

What are the initiatives taken by the college to make the campus eco-friendly?

- Awareness on environment issues and Awareness of carbon footprints.
- Trees are planted in the campus and outside the campus.
- Students are made aware about environmental issues.
- Environment Awareness rallies and street plays were organised.
- Projects on environment were carried out.
- Swach Bharat Abhiyan Conducted.
- Energy conservation – maximizing the use of natural light.
- NSS activities –
 - Swachatta Bharat Abhiyan
 - Cleaning of surrounding area
 - Tree plantation
 - Burning of garbage is not allowed in campus.
 - Plastic free campaign.

Recommendations for making the campus Green.

1. Stand alone solar street lamps with LED lights need to be installed throughout the entire campus. They can be fitted with timers to start and stop them automatically.
2. Sewage treatment plant needs to be set up. This would help saving precious water from the in campus well. The treated water from the STP can be used for gardening as well for flushing.
3. Water efficient fittings and taps to be installed in toilets, bathrooms and faucets to save water. Leakages need to be checked and corrected on a regular basis.
4. Rain Water harvesting potential during Monsoon : 786100 litres from Roff Top. Considering the Average rainfall of the region as 700 mm in a year. Rain Water harvesting can be done by conveying filtered roof top rain water to the campus well by pipes.
5. Planting trees of indigenous species. The advantage of planting local variety trees is that their survival rate is high and most of them including trees like Neem, Vad and Pipal have good air purifying abilities.
6. Lot of biomass gets generated out of leaves and broken twigs of trees. This biomass can be used a fertilizer after treatment. It is recommended that the biomass is put in vermiculture pit or simply used as ground cover. This will form the soil and keep the soil cool. Burning of biomass is not to be allowed in campus.
7. All garbage generated in the campus needs to be segregated. Wet garbage and Dry garbage needs to be kept in different coloured bins. E-waste to be kept in different bins. Garbage should not be burned in the campus. The staff members and the students should be trained and encouraged in compaction and segregation of the garbage. There are some agencies which could collected the plastic waste from the campus.
8. Setting up an Environment committee and Draft an Environment Policy. this would help the staff and students to get conversant with the objectives of the Top Management of the Institute towards environment. a sense of belonging to an Eco Friendly and Green Campus will help each individual participate in cleaning and greening it.
9. Seminars and workshops should be frequently arranged to make everyone aware about the Environment friendly measures.

Conclusion :

Based on the audit conducted at your college you are complying with all important requirements of clause no. 7 of NAAC requirements.

Additional points are given to you for further improvements to strengthen environmental system adopted by you. By complying with these points the effectiveness of system will be improved.

Prepared By**Green Audit Team**

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