GREEN AUDIT CERTIFICATE

2023-24

This certificate has been awarded to

Dayanand Education Society's

DAYANAND COLLEGE OF PHARMACY,

LATUR. Barshi Road, Latur - 413531,

in recognition of the organizations efforts for sustainable development.

Empanelled with

महाऊर्जा

महाराष्ट्र ऊर्जा विकास अभिकरण

(Govt. of Maharashtra Institution)

Reg no. MEDA/ECN/CR-14/2022-23/EA-07

Kedar C. Khamitkar
Regn. No. EA-8287
Certified Energy Auditor

Kedar Khamitkar

Energy Auditor CEA-8287

Certified by Bureau of Energy Efficiency,
Ministry of Power, Govt. of India

Kedar Khamitkar & Associates, Latur

Empanelled with Mahaurja, Govt of Maharashtra Institution

Member - IGBC Indian Green Building Council

ISO 9001:2015

ISO 9001-2015 Certified

Date of Audit : 28/12/2024

ऊर्जा संवर्धन

धन... इंधन.... पर्यावरण... !

Note : Certificate is based on organisation compliance on green audit recommendations and continual maintenance of the system & conduction of surveillance audit

Green Audit Report

2023-24

Dayanand Education Society's

DAYANAND COLLEGE OF PHARMACY, LATUR

Barshi Road, Latur - 413531 (Maharashtra)

Green Audit report Submitted by

Kedar Khamitkar & Associates
Energy Auditor
(Empanelled Mahaurja, Govt. of Maharashtra Institution)
M: 9850244701 Email. : urjabachat@gmail.com

INDEX:

ACKNOWLEDGEMENT

We express our sincere gratitude to the management of Dayanand College of Pharmacy, Latur for awarding us the assignment of Green Audit of their Latur Campus.

We are thankful to: Honorable Principal Dr. K.L. Satpute Madam given opportunity to conduct audit.

we are also thankful to various Head of Departments & other Staff members for helping us during the field measurements.

KEDAR KHAMITKAR
Govt. Certified Energy Auditor
Reg.No.EA-8287
LATUR-Maharashtra

Kedar Khamitkar
Energy Auditor
(Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India)
Empanelled Consultant MAHAURJA (Govt. of Maharashtra Institution)

EXECUTIVE SUMMARY:

Objective	Observation	Remarks / Recommendation
Green Cover - Plantation of Trees	Plantation of trees is started in the campus and the green cover is extended every year in the campus. At Present 32% area campus is having the Green cover.	Good Initiative
Use of Renewable Energy	Institute has been installed Rooftop Solar Power Plant 18 KWp (Attached Photo)	Install additional Solar Power plant of 10KWp
Rain Water harvesting	Rainwater Harvesting has been installed (Attached Photo)	Good Initiative
Avoid Misuse/ wastage of water	Institute has been installed Waste water treatment plant (Attached Photo)	Good Initiative
Bio Waste Management	The Bio Waste – Food Waste generated in the campus is proposed to be feed stock for Bio Gas plant	Recommended for Bio gas plant.
Non Bio Waste	Non Bio Waste – Plastic Bottles / Paper Waste Metals waste is being collected in the dust bins placed across the campus.	It is proposed to install plastic bottle crusher, which can be sold as a Feed stock for the Plastic industry.
E Waste	E Waste – All Electronic Junk is generated in the campus in the form of Used Computer key boards/ Mouse/ CPU's/ Damaged Printers etc.	An agreement is in place with local Company to pick up the E waste every six month
Carbon Foot Print	Mostly staff commute in the Mahanagar Palika Buses -	Found Awareness in the Staff
Transportation	Mostly Students & Staff using EV Vehicles	Recommended to charge EV vehicles in day time between 9am to 3pm

Chapter No.1 Scope of Work & Green Audit Methodology

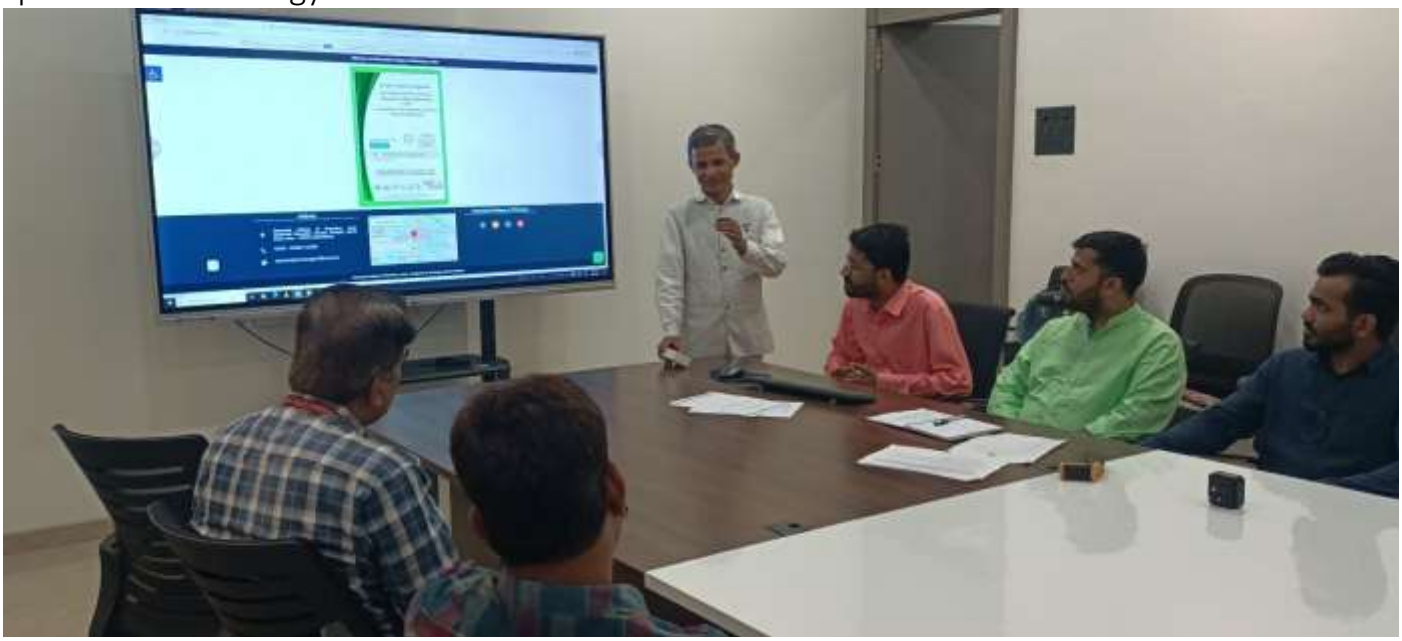
Dayanand College of Pharmacy, Latur entrusted the work of conducting a detailed Green Audit of campus with the main objectives are as bellows:

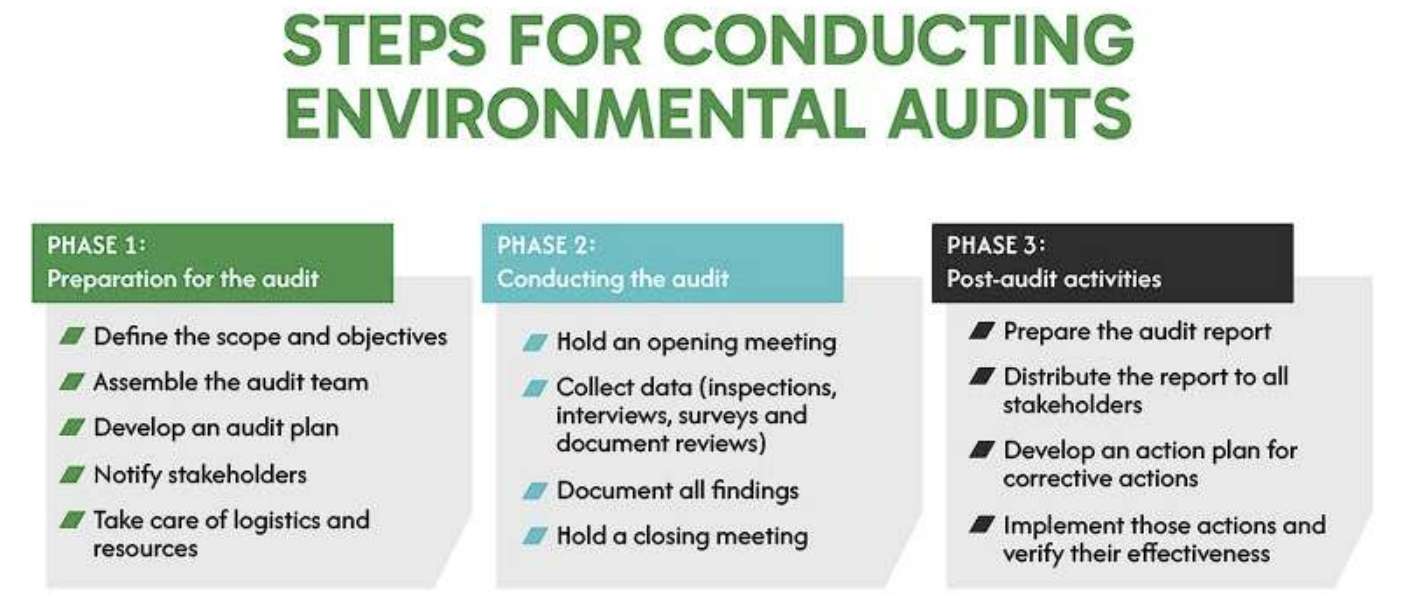
Objectives of Green Audit:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for Green practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in green

Methodology of Green Audit:

Green Audit of Dayanand College of Pharmacy, Latur Campus has been conducted a with specific methodology.





Goals of Green Audit:

Conducted a green audit of Dayanand College of Pharmacy, Latur Campus with specific goals as:

1. Identification and documentation of green practices followed by the Institute.
2. Identify strength and weakness in green practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental Issue before they become problem.

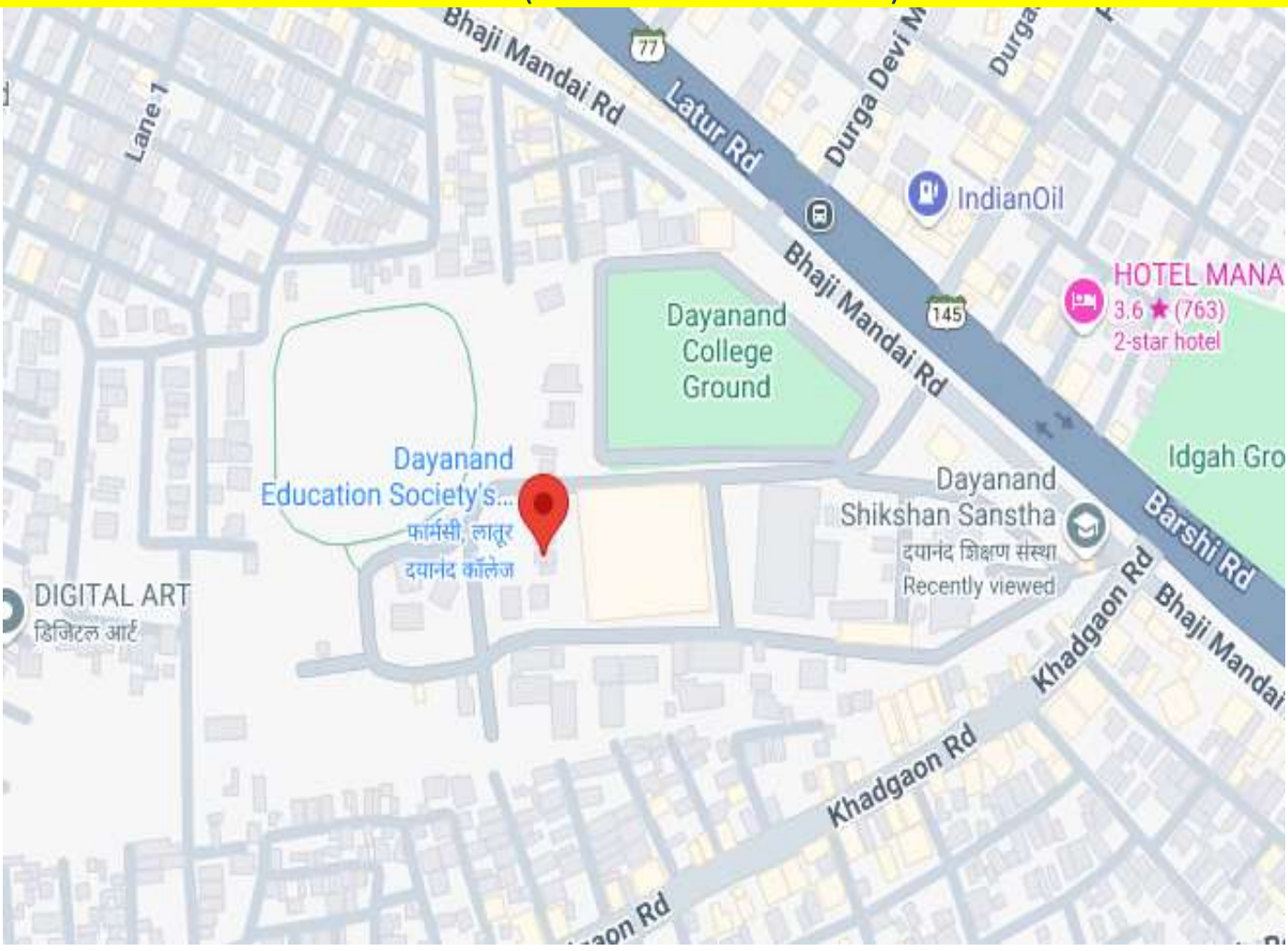
Chapter No.2 Introduction about the Institute

Dayanand education society's Dayanand college of Pharmacy was established in the year 2009 in the heart of city of Dayanand education Campus, Latur. By Dayanand education societies President Shri. Laximramn Lahoti and secretary Shri. Rameshji Biyani has making all efforts to impart the Quality Education.

Dayanand College of Pharmacy is affiliated to Swami Ramanand Teerth University, Nanded , approved by AICTE, PCI and is situated in pollution free sprawling campus spread over 22.5 acres, with the latest equipment, spacious air-conditioned smart lecture halls, computer lab and seminar hall along with good library facilities. DCOP has been successful in providing and maintaining high quality in teaching Pharmaceutical Sciences. The college has committed itself to become a center for excellence in pharmaceutical education and research and be a leader in the field of pharmaceutical sciences including pharmacy practice with the objective of strengthening the healthcare of the country.

Sr.	Head	Particulars
1.	Name	Dayanand College of Pharmacy
2.	Address	Barshi Road, Latur (M.S.)
3.	Courses Offered	Degree in Pharmacy

AERIAL VIEW OF COLLEGE CAMPUS (SOURCE GOOGLE EARTH)

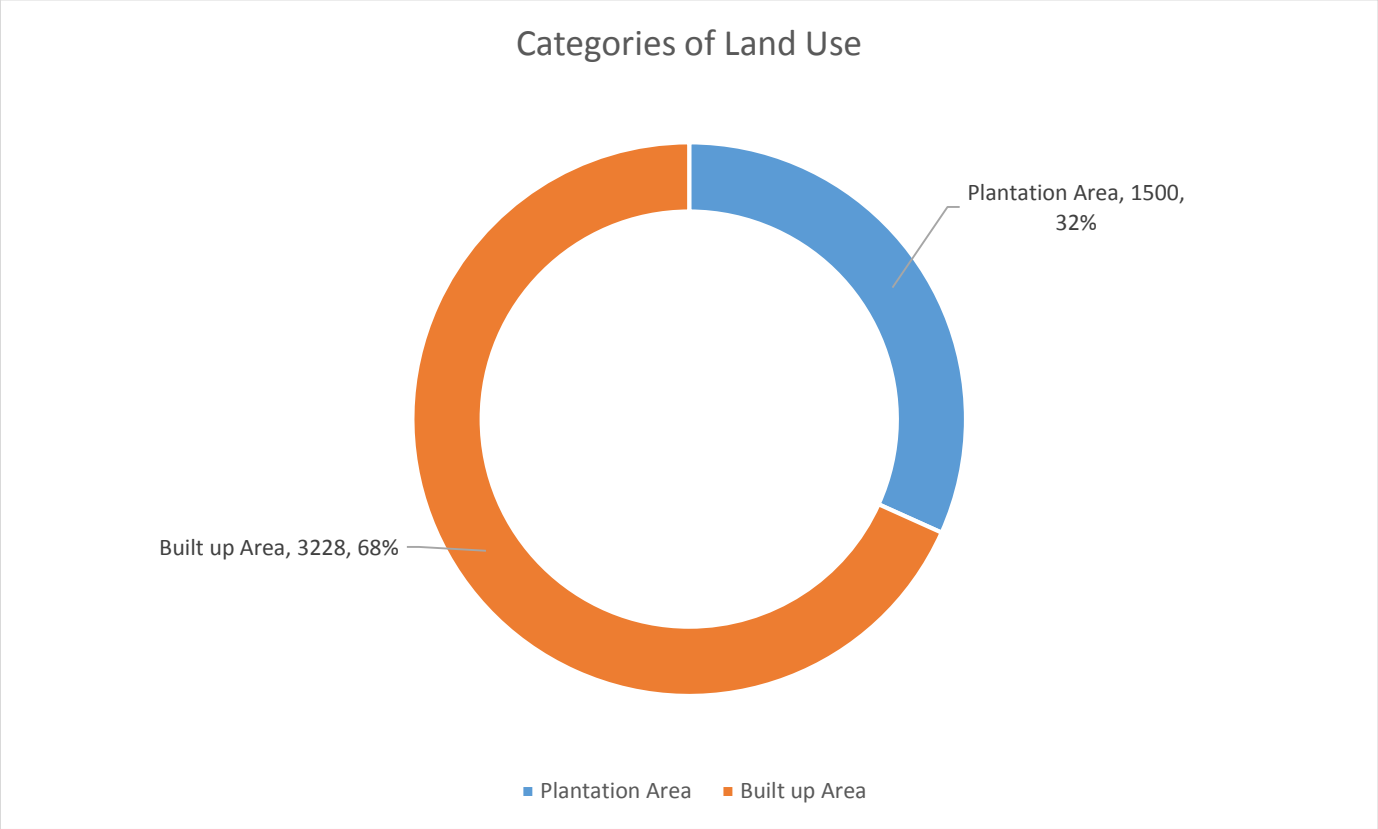


Address: Barshi Road, Latur (Maharashtra) 413531

Chapter No.3 Categories of Land use

Audit Framework and detailed findings of the Audit:

CATEGORIES OF LAND USE AREA	Sq. Feet
PLANTATION AREA	1500
BUILT UP AREA (INCLUDE ROADS)	3228



Observations : Plantation of trees is started in the campus and the green cover is extended every year in the campus. At Present **32%** area campus is having the Green cover.

Chapter No. 4 Green Cover - Plantation of Trees

Sr.	Common name of plant	Botanical name	Quantity
1	Palm (large)	Roystonea regia	3
2	Palm (small)	Roystonea regia	22
3	Supari	Aareca catechu	1
4	Ashok	Saruca asoca	7
5	Mahogani	Swietenia maha goni	2
6	Sagwan	Tectona grandis	2
7	Peepal	Ficus religi osa	1
8	Gulmohar	Delonix regia	2
9	Badam	Terminalia kattppa	3
10	Subabhul	Leucaena leucocephala	2
11	Limbu	Citrus aurantifolia	2
12	Tamarind	Tamarindus indica	1
13	Mango	Mangifera indica	1
14	Bamboo	Bambusoideae	1
15	Sururu	Casuarina equiseti folia	1
16	Nandurki	Toona ciliate	2
17	Nivdung	Cacti species	1
18	Takli	Silene conoidea L	2
19	Aapta	Bauhinia racemosa	2
20	Jaswand	Hibiscus rosasinensis	1
21	Ruchik	Calotropis gigantean	2
22	Adulsa	Justicia adhatoda	1
23	Chafa	Plumeria	2
24	Kektad	Agave Americana	2
25	Necha	Acorus calamus	3
26	Bogan Vel	Bouglanvillea glabra	1
27	Limbu	Citrus aurantifolia	1
28	Buch	Millingtonia hortensis	2
29	Subabhul	Leucaena leucoCephala	4
30	Gulmohar	Delonix regia	26
31	Peepal	Ficus religiosa	1
32	Ashok	Saraca asoca	2
33	Umbar	Ficus racernosa	1
34	Mahogani	Swietenia mahagoni	2
35	-Subäbhul Karanji	Leucaena leucocephala	2
36	Karanji	Millettia pinnata	1
37	Badam	Terminalia kattppa	3
38	Chafa	Plumeria	7
39	Swastik	Tabernaemcntana divaricata	1

Girls Hostel Area

Sr.	Common name of Plant	Botanical name	Quantity
1	Bakuli	Minusops elengi	4
2	Shirish Gulabi	Albizia Lebbeck	10
3	Chafa	Plumeria	3
4	Limbu	Citrus aurantiifolia	2
5	- Kadam	Neolamarckia cadamba	5
6	Sitafal	Annona squamosa	3
7	Limbu	Citrus aurantiifolia	2
8	Wad	Ficus benghalensis	1
9	Palm	Roystonea regia	14
10	Mango	Mangifera indica	10
11	Jambhul	Syzygium cumini	2
12	Mahogani	Swietenia mahagoni	2
13	Limboni	Limoni acidsSima L	1
14	Jaswand	Hibiscus rosasinensis	5
15	Peepal	Ficus religiosa	1
16	Parijatak	Nyctanthes arbor-tristis	3
17	ChristmasTree	Araucaria columoaris	2
18	Ramfal	Annona reticulata	1
19	SwastiK	Tabernae montana	2
20	Adulsa	Justicia adhatoda	1
21	Sagwan	Tectona grandis	16
22	Shevga	Moringa oleifera	4
23	Dalimb	Punica granatum	2
24	Peru	Psidium guajava	2

Canteen (behind meeting hall):

Sr.	Common name of plant	Botanical name	Quantity
1	Badam	Millettia pianata	8
2	Subabhul	Leucaena leucocephala	2
3	Umbar	Ficus racemosa	2
4	Peepal	Ficus religiosa	2
5	Kadam	Neolamarckia cadamba	3
6	Limbil	Citrus aurantiifolia	1

Sr.	Common name of plant	Botanical name	Quantity
1	Ashoka	Sarucu asoca	1
2	Badam	Terminalia catapa	6
3	Subabul	Leucaena leucocephala	1
4	Mango	Mangifera indica	4
5	Palm	Roystonea regia	2
6	Peepal	Ficus relogiosa	2
7	Buch	Milingtonia horténsis	1
8	Chafa	Plumeria	2
9	fan palm	Livistona chipennensis	2
10	Bakuli	Minussops elngi	6
11	Kadam	Neolamarckia cadamba	2
12	Gulmohar	Delonix regia	2
13	Sitafal	Annona squamosa	1
14	Jaswand	Hibiscus rosasinensis	1
15	Adulsa	Justicia adhathoda	1
16	Jambhul	Syzygium cumini	1
17	Limbu	CitruS aurantitolia	1
18	Karanji	Millettia pinnata	1
19	Ghaneri	Lamtana Camplra Linn	1
20	Mahagoni	Swietenia mahagoni	2
21	Shevaga	Moringa olifera	2
22	Kadulimb	Azadirachta indica	4
23	Bor	Ziziphus mauritiana	1
24	Sonmohar	Peltophorum pterocarpum	1
25	Arjun	Terminalia arjuna	1
26	Awala	Phyllanthus emblica	1
27	Others		17

Boys' hostel:			
Sr.	Common name ofplant	Botanical name	Quantity
1	Ashoka	Saruca asoca	6
2	Badam	Terminalia catapa	3
3	Bakuli	Minusops elengi	5
4	Kadulimb	Azadirachta indica	1
5	Mango	Mangifera indica	2
6	Apta	Bauhinia racemosa	1

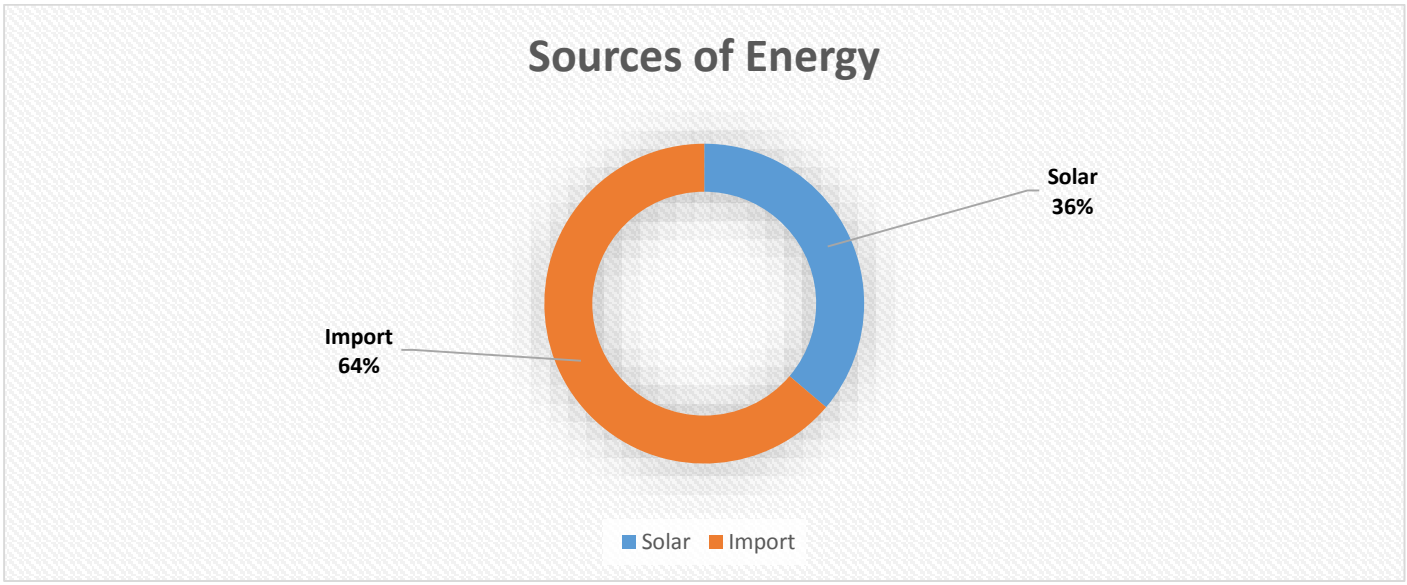
Indoor stadium area:			
Sr.	Common name of plant	Botanical name	Quantity
1	Naral	Coco nucifera	5
2	Bakuli	Minusops elengi	15
3	Ashoka	Saruca asoca	1
4	Rubber	Hevea brasiliensis	1
5	Jambhul	Syzygium cumini	2
6	Ruchik	Calotropis gigantean	1
7	Shisham	Dalbergia $issoo	1
8	Saptparni	Alstonia schoaris	1

Boys' hostel (back area):			
Sr.	Common name ofplant	Botanical name	Quantity
1	Palm	Roystonea regia	20
2	Subabhul	Leucaena leucocephala	2
3	Bamboo	Bambusoidea	2
4	Arjun	Terminalia arjuna	5
5	Mango	Mangifera indica	3
6	Chafa	Plumeria	1
7	Papaya	Carica Papaya	1
8	Peepal	Ficus relogiosa	2
Well Area			
Sr.	Common name of plant	Botanical name	Quantity
1	Umbar	Ficus racernosa	1
2	Bakuli	Minusops elengi	9
3	Nandurki	Toona ciliate	1
Cricket ground:			
Sr.	Common name of plant	Botanical name	Quantity
1	Bakuli	Minusops eléngi	7
2	Kadulimb	Azadirachta indica	3
3	Mahogani	Swietenia mahagöni	1
4	Shami	Prosopis cineraria	1
5	Vada	Ficus benghalensis	6
6	Peepal	Ficus relogiosa	6
7	Subabhul	Leucaena leucocéphala	10
8	Mango	Mangifera indica	1
9	Others		12

Chapter No. 5: Use of Clean & Green Energy

Dayanand College of Pharmacy, Latur has been installed 18KW Capacity Solar power plant.

Observations : Percentage of Annual Power requirements met through renewable energy Sources Current year data is 36%



Electricity Generated 17280 Units/Year Electricity Imported 30445 Units / Year

Suggestions : Install Occupancy Sensors to minimize losses

Install Solar Street Lights to Minimize Electricity Import during Night.

Chapter No. 6: Study of Waste Management

Environmental consciousness and sustainability friendly initiatives

The internal communication of the College is through Internet within the staff members. There are hardly any Drives, CDs used for day to day operations. Hence as far as the e-waste is concerned hardly any waste is generated during the day to day operations. In addition to this the College authorities have already finalized Authorized e-Waste management agency to dispose of the old equipment.

Solid Waste management:

1. The college is taking care of cleanliness and hygiene every time. Daily garbage is collected and segregated into degradable and non-degradable waste by housekeeping personnel.
2. Plant leaves, all the non-toxic, biodegradable waste is collected and used for making compost through the Vermicomposting process for which pits having size 5.5 x 1.7 x 0.6 have been made in the campus.
3. Waste material like plastic, papers, glass, metal, newspapers etc. are collected and sold out to to authorize scrap vendors for its recycling from time to time.
4. Non-degradable waste is collected separately. Dayanand education society has tied up with the local Municipal Committee for the disposal of non-degradable solid waste. This waste is collected in the vehicle and handed over to the Latur Municipal Corporation garbage collecting unit.
5. College is adopting almost paperless concept by digitization of office procedures through tally ERP, examination work and daily attendance is maintained using Vm edulife software, thus, reducing paper-based waste.
6. One side printed papers are reused for printing drafts before final document, circulating notice, meeting minutes, and notes in office practices. This reduce paper usage and paper wastage.

Separation of waste

Collection of solid waste from college building by municipal corporation vehicle

Waste water treatment Plant at campus

Chemical waste management:

Faculty members and lab technicians guide all the students for handling chemicals properly. Fuming chamber is available at the laboratories for handling hazardous chemicals. The water soluble chemicals are solubilized in water and disposed through the sewage system. Various laboratories generate organic and inorganic waste. Inorganic waste is disposed off with water, while organic waste is burned out.

Organic Compost prepared in College Campus

Observations : Institute has been done Good Management of the various types of degradable and non-degradable waste

E-waste Management

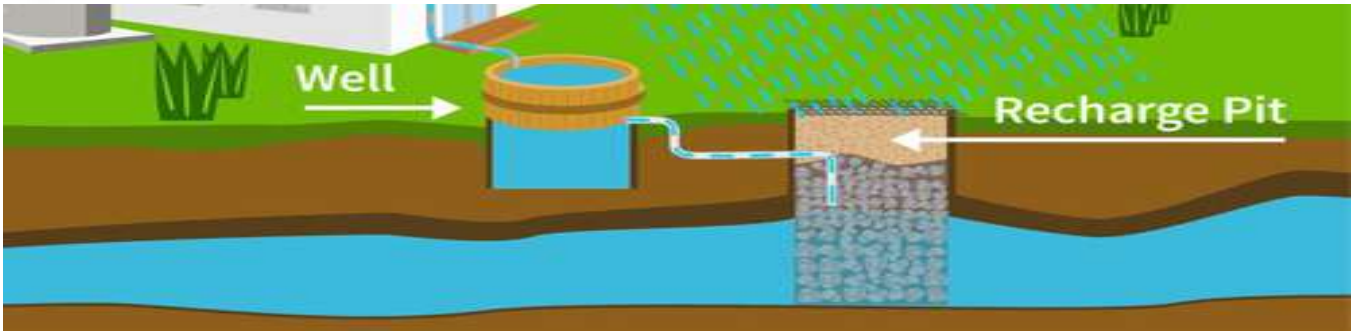
Negligible E-waste is generated due to proper maintenance of electronic devices. E-waste is segregated and given to approved venders for possible recycling. Facility for collection of e-waste like scanners, printers, key boards, monitors etc. is available, It is disposed off accordingly.

RAIN WATER HARVESTING:

Water scarcity is serious problem throughout the world for both urban & rural community. Urbanization, industrial development & increase in agricultural field & production has resulted in overexploitation of groundwater & surface water resources and resultant deterioration in water quality. The conventional water sources namely well, river and reservoirs, etc. are inadequate to fulfill water demand due to unbalanced rainfall. While the rainwater harvesting system investigate a new water source.

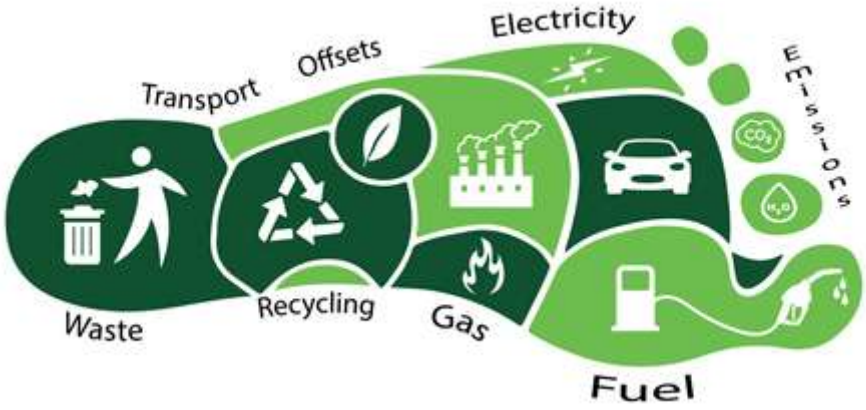
Rainwater Harvesting Recharge Points:

Rainwater percolation pits were built in the campus to recharge bore well and help the water infiltration.



Chapter No. 7 : CARBON FOOTPRINTING Electricity IMPORT April 23 to Nov 24

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the College for performing its day to day activities. The College Imports Electrical Energy during Night for various Electrical gadgets.



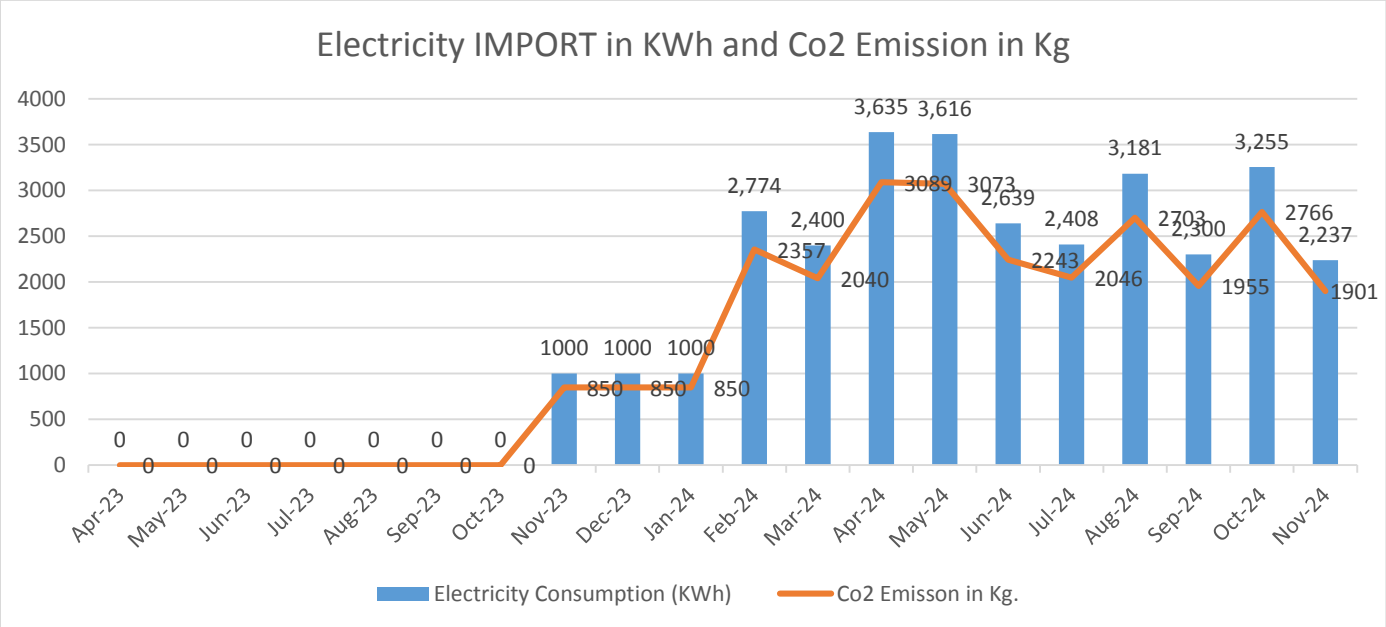
Basis for computation of CO2 Emissions : Electricity IMPORT April 23 to Nov 24

The basis of Calculation for CO2 emissions due to Electrical Energy are as under

1 Unit (kWh) of Electrical Energy releases **0.8 Kg of CO2** into atmosphere

Based on the above Data we compute the CO2 emissions which are being released in to the atmosphere by the College due to its Day to Day operations

Month wise Electricity Import details:



Observations: The College Imports Electrical Energy during Night for various Electrical gadgets. Electricity imported from April 23 to Nov 24 = **31445** KWh/year

Electricity: Input value (in KWh/Yr) X 0.85 (Emission Factor)

= Output value in (Kg of CO2) = 26728 Kg of CO2

Suggestions:

Reduce the Electricity Import during Night install Solar Streetlights.

Install Occupancy Sensors to minimize losses in Lighting System

Chapter No. 8 : Air Quality Index

Air pollution has long term and short term impact on the biotic and abiotic component of the environment. Air pollution sources for rural areas are vehicular activities and domestic firewood burning, fuel burning etc. The major pollutants released in the atmosphere are PM10, PM2.5, SO2, and NOx, CO etc. The health of the students, instructors, and staff at the academic institute is dependent on the air quality. Windstorms, pollen grains, natural dust, traffic emissions, generators, fires, and laboratory smells, among other things, are all causes of air pollution on the college campus.

The Air Quality Index (AQI) is a measure of the amount of pollutants in the air. The AQI is divided into categories, with values below 100 generally considered satisfactory.

Observations : Actual measurement AQI 136 Found above 100 i.e. Poor

Suggestions: Don't burn candles, leaves, garbage, plastic or rubber. Use air filters and air cleaners designed to reduce particles

Chapter No. 9 :

Best Practices & Activities

Environment & Energy usage Policy: Institute has been declared Environment Policy

Policy Document On Environment and Energy Usage

- To install LED bulbs in the complete campus to save energy
- To operate institute building in most efficient energy manner.
- Maximum use of Renewable Energy.
- Encourage a culture of Energy conservation on campus.
- To take additional measures to continuously improve our energy consumption.
- To develop and maintain Energy Management System based on ISO: 50001.
- To encourage use of advanced technology to minimize energy consumption.
- To engage in dialogue with the government agencies, and actively work with the local organizations in the areas of environment, energy efficiency and sustainable development.
- To strengthen our employees' and students' environmental knowledge and skills in order to improve our own environmental performance.
- To provide information and training opportunities on energy saving measures.
- To train our employees and students through our Enviro Club to make them 'Go Green Specialists' and partners to plant trees each year.

Principal

Campaign : Save Energy for Benefit of Self & Nation

14th December 2024 National Energy Conservation Day

JOINT INITIATIVE for Sustainable Development Project

Dayanand Education Society Dayanand College of Pharmacy with MEDA (Gov. of Maharashtra Institution)

Hon'ble President of Dayanand Education Society Laxmi Raman Lahoti, Hon'ble General Secretary Ramesh G Biyani, Principal Dr. Gaikwad, Principal Dr. Nathani Madam, Principal in charge Dr. S.S. Bellale, Principal Dr. Satpute Madam and other staff members of the college were present.

Environmental education through systematic environmental management approach.

Campaigns: Nature camps, field trips and some of these activities are year round programs and others are regular year wiser semester wise or any other stipulated time bound programs.

Several significant and fruitful awareness programs both students and staff of the Campus are arranged every year in the campus. Reflections from students are Evident how effective such awareness programs conducted in the campus. Major programs conducted in the campus during the last Five years.


#HAPPY EARTH
PCRA
पेट्रोलियम संरक्षण अनुसंधान संघ
Make Earth a
HAPPY PLACE