GREEN AUDIT REPORT

SHRI VILE PARLE KELAVANI MANDAL'S,
INSTITUTE OF PHARMACY, DHULE

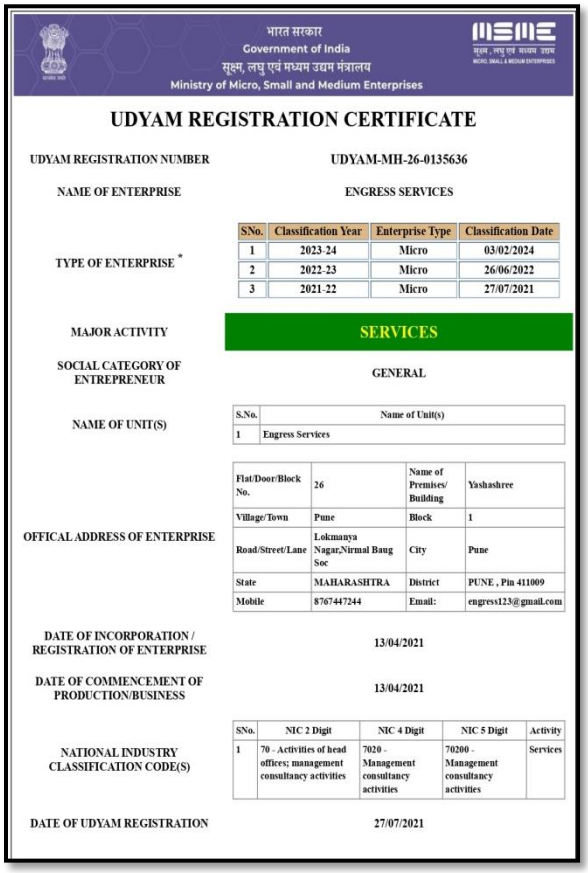
Year: 2023-24

Prepared by:

ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society
Near Muktangan English School, Parvati, Pune 411009
Phone: 09890444795 Email: engress123@gmail.com

Registration Certificates: UDYAM, MEDA, ASSOCHAM GEM-CP, ISO: 9001 & 14001:



भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER	UDYAM-MH-26-0135636
NAME OF ENTERPRISE	ENGRESS SERVICES

TYPE OF ENTERPRISE *

SNo.	Classification Year	Enterprise Type	Classification Date
1	2023-24	Micro	03/02/2024
2	2022-23	Micro	26/06/2022
3	2021-22	Micro	27/07/2021

MAJOR ACTIVITY: SERVICES

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	Engress Services

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	26	Name of Premises/ Building	Yashashree
Village/Town	Pune	Block	1
Road/Street/Lane	Lokmanya Nagar,Nirmal Baug Soc	City	Pune
State	MAHARASHTRA	District	PUNE , Pin 411009
Mobile	8767447244	Email:	engress123@gmail.com

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 13/04/2021

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 13/04/2021

NATIONAL INDUSTRY CLASSIFICATION CODE(S)

SNo.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	70 - Activities of head offices; management consultancy activities	7020 - Management consultancy activities	70200 - Management consultancy activities	Services

DATE OF UDYAM REGISTRATION: 27/07/2021

GEM Certificate

ASSOCHAM

ASSOCHAM hereby certifies that

Mr. A Y Mehendale

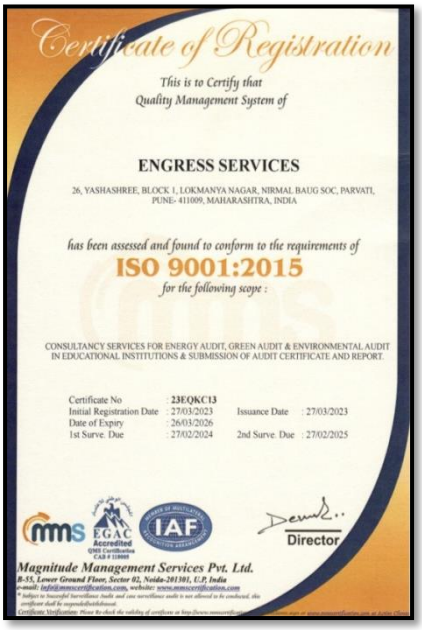
has successfully passed the
Green and Eco-friendly Movement Certified Professional Test (GEM CP)
with
"Excellent Performance"
on
06 June, 2022

He/she is now eligible to execute the GEM Sustainability Certification Projects.
ASSOCHAM feels proud to award the GEM Certified Professional title to him/her.

Pankaj R. Dharkar
Chairman, GEM

GEM CP 22/788

Deepak Sood
Secretary General, ASSOCHAM



Certificate of Registration

This is to Certify that
Quality Management System of

ENGRESS SERVICES

26, YASHASHREE, BLOCK 1, LOKMANYA NAGAR, NIRMAL BAUG SOC, PARVATI, PUNE- 411009, MAHARASHTRA, INDIA

has been assessed and found to conform to the requirements of
ISO 9001:2015
for the following scope :

CONSULTANCY SERVICES FOR ENERGY AUDIT, GREEN AUDIT & ENVIRONMENTAL AUDIT IN EDUCATIONAL INSTITUTIONS & SUBMISSION OF AUDIT CERTIFICATE AND REPORT.

Certificate No : 23EQKC13
Initial Registration Date : 27/03/2023
Date of Expiry : 26/03/2026
1st Surve. Due : 27/02/2024
Issuance Date : 27/03/2023
2nd Surve. Due : 27/02/2025

Director

Magnitude Management Services Pvt. Ltd.
B-55, Lower Ground Floor, Sector 02, Noida-201301, U.P, India

MAHARASHTRA ENERGY DEVELOPMENT AGENCY

Maharashtra Energy Development Agency
(Government of Maharashtra Institution)
Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary, Aundh, Pune, Maharashtra 411067
Ph No: 020-35000450
Email: eec@mahaurja.com, Web: www.mahaurja.com

ECN/2022-23/CR-43/1709 — 10th May, 2022

CERTIFICATE OF REGISTRATION
FOR CLASS 'A'

We hereby certify that, the firm having following particulars is registered with *MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)* under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.

Name and Address of the firm : M/s Engress Services
Yashshree, 26, Nirmal Bag Society,
Near Muktangan English School,
Parvati, Pune – 411 009.

Registration Category : *Empanelled Consultant for Energy Conservation Programme for Class 'A'*

Registration Number : *MEDA/ECN/2022-23/Class A/EA-32.*

- Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and take concrete steps to achieve the evaluated energy savings.
- MEDA reserves the right to visit at any time without giving prior information to verify quarterly activities performed by the firm and canceling the registration, if the information is found incorrect.
- This empanelment is valid till **09th May, 2024** from the date of registration, to carry out energy audits under the Energy Conservation Programme
- The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.

General Manager (EC)

Certificate of Registration

This is to Certify that
Environmental Management System of

ENGRESS SERVICES

26, YASHASHREE, BLOCK 1, LOKMANYA NAGAR, NIRMAL BAUG SOC, PARVATI, PUNE- 411009, MAHARASHTRA, INDIA

has been assessed and found to conform to the requirements of
ISO 14001:2015
for the following scope :

CONSULTANCY SERVICES FOR ENERGY AUDIT, GREEN AUDIT & ENVIRONMENTAL AUDIT IN EDUCATIONAL INSTITUTIONS & SUBMISSION OF AUDIT CERTIFICATE AND REPORT.

Certificate No : 23EEKW20
Initial Registration Date : 29/03/2023
Date of Expiry : 28/03/2026
1st Surve. Due : 29/02/2024
Issuance Date : 29/03/2023
2nd Surve. Due : 28/02/2025

Director

Magnitude Management Services Pvt. Ltd.
B-55, Lower Ground Floor, Sector 02, Noida-201301, U.P, India

INDEX

ACKNOWLEDGEMENT

We at Engress Services, Pune, express our sincere gratitude to the management of Shri Vile Parle Kelavani Mandal's Institute of Pharmacy, Dhule for awarding us the assignment of Green Audit of their Pimpri Campus for the Academic Year: 2023-24.

We are thankful to all Staff members for helping us during the field study.

EXECUTIVE SUMMARY

1. Shri Vile Parle Kelavani Mandal's Institute of Pharmacy, Dhule consumes Energy in the form of **Electrical Energy and LPG;** used for various gadgets, office & other facilities.

2. Present Energy Consumption & CO_2 Emission:

No	Particulars	Value	Unit
1	Annual Energy Purchased	**65530**	kWh
2	Annual CO_2 Emissions	**61.61**	MT
3	Annual LPG Consumed	**228**	Kg

3. Usage of Renewable Energy:

- The Institute has installed a Roof Top Solar PV Plant of Capacity **72 kWp**.
- The Energy Generated by Roof Top Solar PV Plant in 2023-24 is **86400 kWh.**
- The reduction in Annual CO_2 Emission in 2023-24 is **80.35 MT.**

4. Waste Management:

No	Head	Particulars
1	Solid Waste	Segregation of Waste at source
2	Organic Waste	Segregation & handover to Municipal Council
3	Sanitary Waste	Provision of Sanitary Waste Incinerator
4	Bio Medical Waste	Provision of a Dedicated Disposal Pit
5	Liquid Waste	Installation of Sewage Treatment Plant
6	Laboratory Liquid Waste	Provision of a Soak Pit
7	Chemical Fumes'	Provision of Fuming Hood
8	E Waste	Disposed of through HP Customer Support Agency

5. Rain Water Management & Water Conservation:

The rain water falling on the terrace is collected through pipes and is used for increasing the underground water table. A soak tank is provided for collection of drained water. An open well is there, wherein the rain water is collected by gravity is stored and is used for gardening purpose.

6. Green & Sustainable Practices:

- Maintenance of good Internal Road & Tree Plantation in the campus.
- Provision of Ramp, Wheel Chair & Signage for Divyangajan
- Creation of awareness on Plastic Free campus by Display of Posters
- Provision of E Vehicle in the Campus

7. Assumptions:

- **1 kWh** of Electrical Energy releases **0.93 Kg** of **CO_2**into atmosphere
- **1 Kg** of LPG releases **2.94 Kg of CO_2** into atmosphere
- Average Energy generated by **1 kWp** Solar PV Plant : **4 kWh/Day**
- Annual Solar Energy Generation Days: **300 Nos**

8. References:

- For CO_2 Emission Calculations: www.ccd.gujarat.gov.in
- For Roof Top Solar Energy Generation: www.solarrooftop.gov.in

ABBREVIATIONS

SVKM	Shri Vile Parle Kelavani Mandal
kWh	Kilo Watt Hour
kWp	Kilo Watt Peak
Kg	Kilo Gram
MT	Metric Ton
CO_2	Carbon Di Oxide
LPD	Liters per Day
LPG	Liquefied Petroleum Gas

CHAPTER-I
INTRODUCTION

1.1 Introduction:

A Green Audit is conducted at Shri Vile Parle Kelavani Mandal's Institute of Pharmacy, Dhule

1.2 Key Study Points:

No	Particulars
1	Study of Present Energy Consumption & CO_2 Emission
2	Study of Usage of Renewable Energy
3	Study of Waste Management Practices
4	Study of Rain Water Management
5	Study of Green & Sustainable Initiatives

1.3 Institute Location Image:

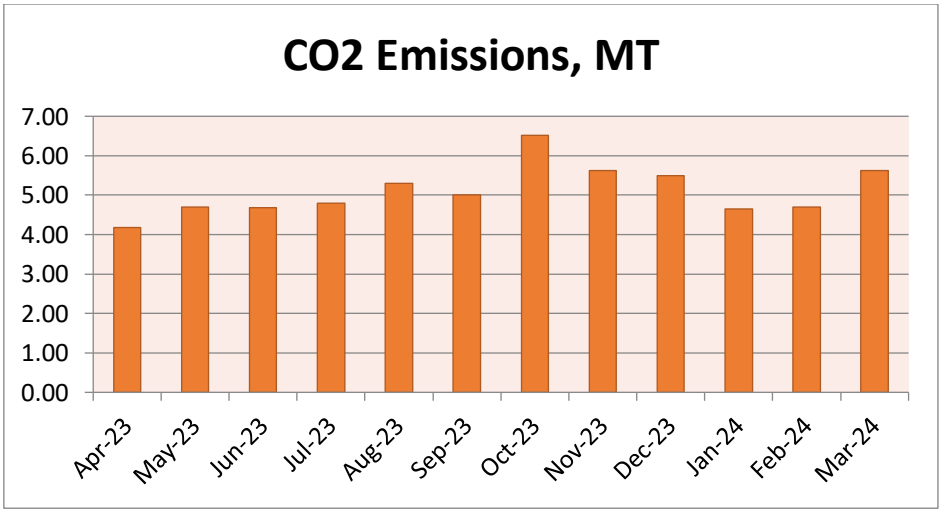
CHAPTER-II
STUDY OF ENERGY CONSUMPTION & CO_2 EMISSION

- **A Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO_2 Emissions: 1 kWh** of Electrical Energy releases **0.93 Kg of CO_2** into atmosphere. **1 Kg of LPG** releases **2.94 Kg** of CO_2 into atmosphere.

Table No 1: Month wise Energy Consumption & CO_2 Emissions:

No	Month	Energy Purchased, kWh	LPG Consumed, Kg	CO_2 Emissions, MT
1	Apr-23	4459	19	4.20
2	May-23	5025	9	4.70
3	Jun-23	4975	38	4.74
4	Jul-23	5125	19	4.82
5	Aug-23	5687	10	5.32
6	Sep-23	5358	38	5.09
7	Oct-23	6978	10	6.52
8	Nov-23	6025	19	5.66
9	Dec-23	5875	9	5.49
10	Jan-24	4974	19	4.68
11	Feb-24	5025	19	4.73
12	Mar-24	6024	19	5.66
13	Total	65530	228	61.61
14	Maximum	6978	38	6.52
15	Minimum	4459	9	4.20
16	Average	5460.83	19	5.13

Chart No 1: Month wise CO_2 Emissions:



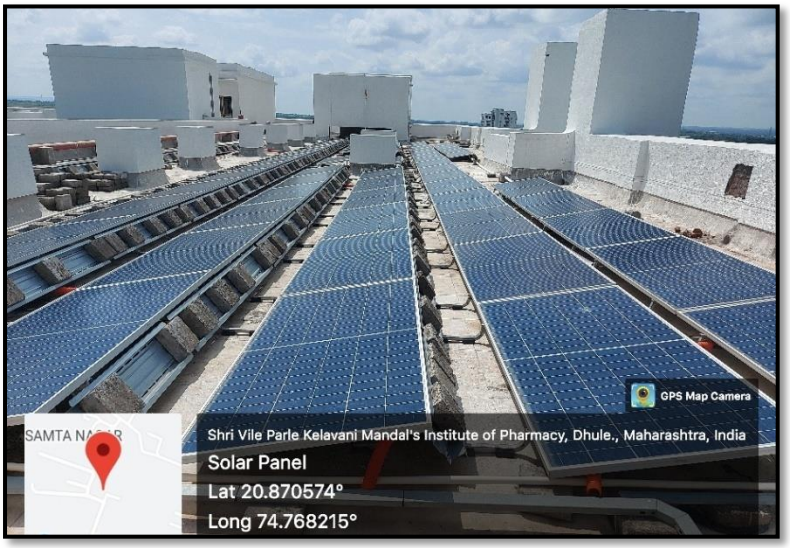
CHAPTER III
STUDY OF USAGE OF RENEWABLE ENERGY

The Institute has installed a **72 kWp** capacity Roof top Solar PV Plant. We compute the Reduction in Annual CO_2 Emission.

Table No 6: Computation of Reduction in Annual CO_2 Emission:

No	Particulars	Value	Unit
1	Roof Plant Solar PV Plant Capacity	72	kWp
2	Average Daily Energy Generated by 72 kWp Plant	4	kWh
3	Annual Generation Days	300	Nos
4	Annual Energy Generated	**86400**	kWh
5	1 kWh of Electrical Energy emits	**0.93**	Kg of CO_2
6	Reduction in CO_2 emission by Solar PV Plant **= (4) * (5)/1000**	**80.35**	MT/Annum

Photograph of Roof Top Solar PV Plant:



CHAPTER IV
STUDY OF WASTE MANAGEMENT

In this Chapter, we present the Waste Management Practices, followed by the Institute.

Details of Waste Management Practices:

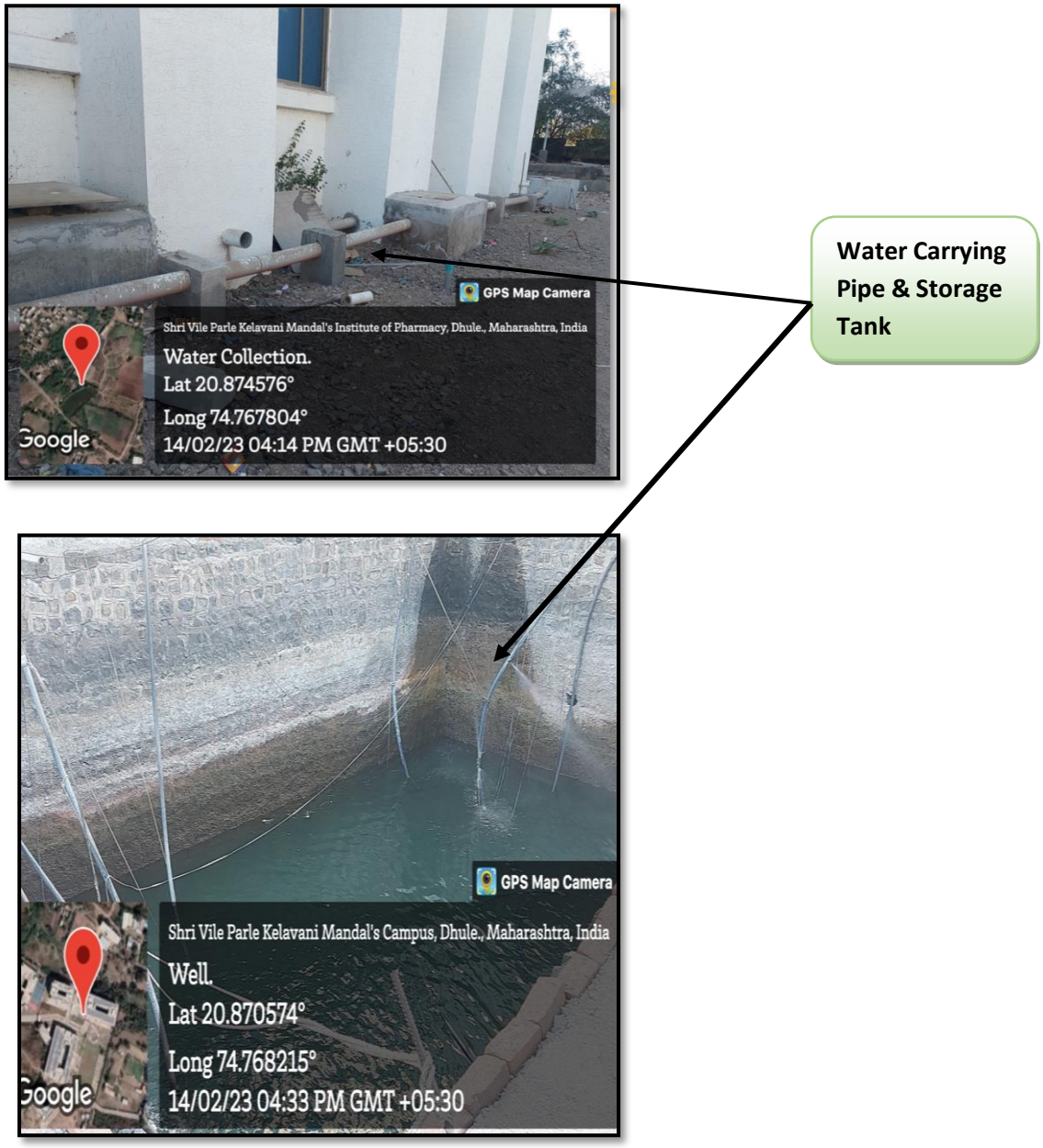
No	Head	Observation	Photograph
1	**Solid Waste**	Segregation of Waste at Source & Handover to Municipal Council	**Waste Collection Bin:** 
2	**Organic Waste**	Segregation at source and handover to Municipal Council	**Handing over Wet Waste to Municipal Authorities:**  Housekeeping staff dumping segregated wastes in Dhule Municipal Corporation's garbage collecting van
2	**Sanitary Waste**	Provision of Sanitary Waste Incinerator	**Sanitary Waste Incinerator**: 

3	**Liquid Waste**	Provision of Sewage Treatment Plant of Capacity 600 m^3/Day	**Sewage Treatment Plant:** 
4	**Bio Medical Waste**	Provision of Special Pit for disposal of Bio Medical Waste	**Bio Medical Disposal Pit** 
5	**Laboratory Liquid Waste**	Provision of a Soak Pit for Disposal of Laboratory Liquid Waste	**Chemical Waste Soak Pit** 
6	**Chemical Fumes' Management**	Provision of Fuming Hood for Fumes' Management	**Fuming Hood** 
7	**E Waste**	**Disposed of through HP Customer Support**	

CHAPTER-V
STUDY OF RAIN WATER MANAGEMENT

The rain water falling on the terrace is collected through pipes and is used for increasing the underground water table. A soak tank is provided for collection of drained water. An open well is there, wherein the rain water is collected by gravity is stored and is used for gardening purpose.

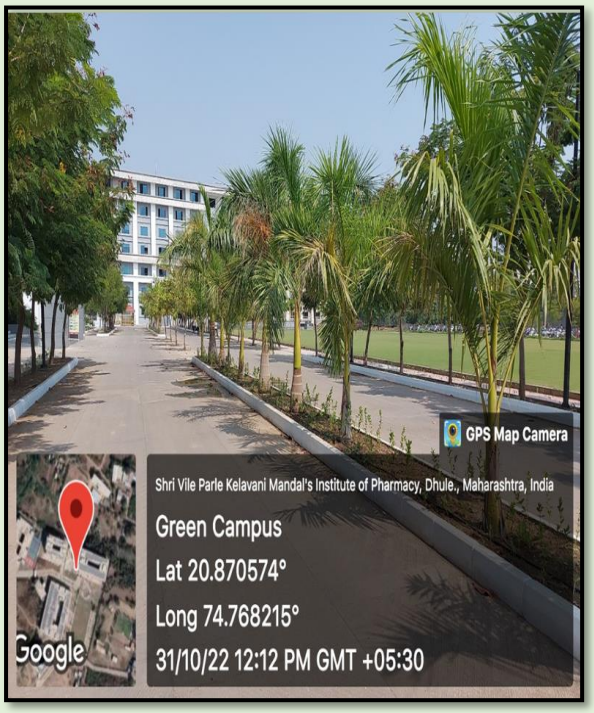
Photograph of Underground Rain Water Pipe and Water Collection Tank:

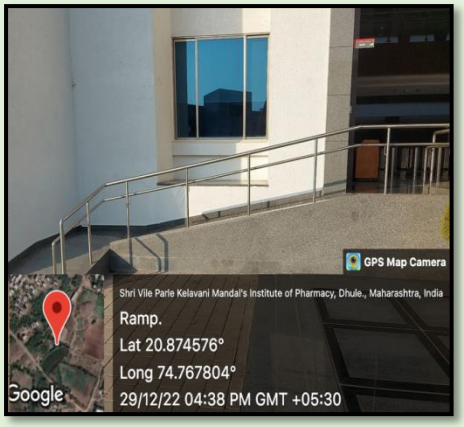
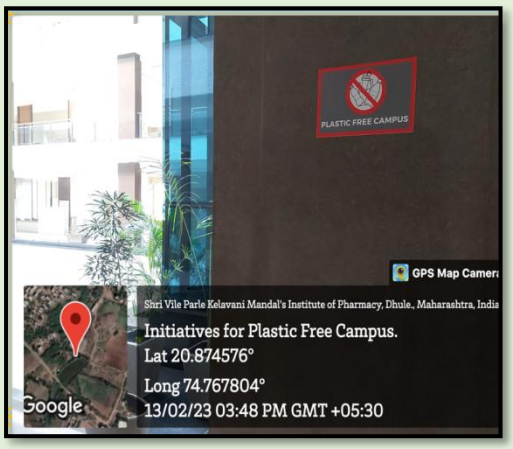


CHAPTER-VI
STUDY OF GREEN & SUSTAINABLE PRACTICES

In this Chapter, we present the Green & Sustainable Practices followed by the Institute.

Green & Sustainable Practices:

No	Head	Observation	Photograph
1	**Easy Movement of Stake Holders**	Provision of Good Internal Road within the Campus	**Internal Road:** 
2	**Tree Plantation**	Internal Tree Plantation in the Campus	**Internal Tree Plantation:** 

3	**Facilities for Divyangajan**	Provision of Ramp for Divyangajan	**Ramp for Divyangajan:** 
4	**Creation of Awareness among Stake Holders**	Display of Poster on Plastic Free Campus	**Poster on Plastic Free Campus:** 
5	**Promotion of E Vehicles**	Usage of E Vehicle for internal Travelling in the Campus	**E Vehicle** 

ANNEXURE-I
LIST OF VARIOUS MEDICINAL PLANTS IN THE CAMPUS

No.	Name of Plant	No.	Name of Plant
1.	Aasmantara	2.	Kuchla
3.	Aawla	4.	Mandukparni
5.	Aapta	6.	Mehendi
7.	Acacia babhul	8.	Mogra
9.	Aduisa-Hirva	10.	Musali
11.	Alpinia	12.	Naral
13.	Arjun	14.	Neem
15.	Ashwagandha	16.	Nimbu
17.	badam	18.	Nirgudi-hirvi
19.	Bael	20.	Palas
21.	Bakul	22.	Panfuti
23.	Behera	24.	Panowa
25.	Bhokar	26.	Parijat
27.	Bhuiarmla	28.	Peru
29.	Biba	30.	Pimpli-Lendi
31.	Bitti Yellow	32.	Putranjiva
33.	Cassia alata	34.	Raktachandan
35.	Chafa-Lal	36.	Ratrani
37.	Chafa-nag	38.	Ritha
39.	Chitrak	40.	Sadafuli
41.	Croton	42.	Santra
43.	Dalchini	44.	Sarpagandha
45.	Damvel	46.	Stevia
47.	Devkapas	48.	Shatavari
49.	Gavtichaha	50.	Silver Oak
51.	Gunj-Pandhari	52.	Sita Ashok
53.	Gudmar	54.	Sitaphal
55.	Gulvel-Lahan	56.	Sonchafa
57.	Gulvel-Motha	58.	Tagar

59.	Gunj-Black	60.	Tejpan
61.	Halad kali	62.	Tuti
63.	Haladpopati	64.	Veldoda
65.	Hirda	66.	KapurTulsi
67.	Insulin	68.	LaungTulsi
69.	Jaifal	70.	Kunda
71.	Jambhul	72.	Kapur
73.	Jasvanda	74.	Ananta
75.	Jotishmati	76.	Kalmegh
77.	Kadamb	78.	Miri
79.	Kadipatta	80.	RaktRohida
81.	Kallashpati	82.	Sahadevi
83.	Kanchan-White	84.	Shevga
85.	Karanj	86.	Kolinjan
87.	Khair	88.	Anjir
89.	Kokkum	90.	Avocado
91.	Korfad	92.	Grape Fruit
93.	Krishna kamal	94.	Id Limbu

List of Trees:-

Campus			**In House**			
Almond	Palm Tree	Other	Small	Large	Planted	Botanical Garden
14	60	82	100	70	12	94