Quality audits on environment and energy regularly undertaken by the Institution.

The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion and sustainability activities

Green Audit Report

Suman Ramesh Tulsiani Technical Campus Faculty of Engineering,

Khamshet, Tal: Maval, Dist: Pune.

Contents

1. Introduction:

Green Audit can be defined as systematic identification, quantification, recording, analysis and reporting of components of environmental diversity of campus. It aims to analyse a green practices within and outside of college campus which will have an impact on ambiance. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. The audit is helpful to improve an environmental condition within or outside of a campus.

About College:

Suman Ramesh Tulsiani Technical Campus- Faculty of Engineering is institute run by Suman Ramesh Tulsiani Charitable Trust established in 1989 at Mumbai. The trust was started by philanthropists and academicians who have got the zeal to promote the academic interest of educationally, economically and backward students at large. SRTTC-FOE is an extended effort by trusty to ensure excellence in imparting quality technical education to fulfil need of the society, globally, through continual improvement. The college run Civil, Computer and Mechanical Engineering degree courses and Civil, Mechanical Engineering diploma courses.

The college has also adopted the **„Green Campus"** system for environmental conservation and sustainability. There are main three pillars namely; minimum environmental foot print, positive impact on health of all stake holders and 100% students demonstrating environmental literacy. The goal is to reduce emission of air pollutants, conservation of energy and water while creating an atmosphere where students can learn and be healthy. The
„Green Campus" has been active directly or indirectly since establishment of college. The college administration works on the several facets of „Green Campus" including Water conservation, Tree plantation, Waste management, Paperless work, Alternative energy etc.

2. Objectives of the Study:

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the 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:

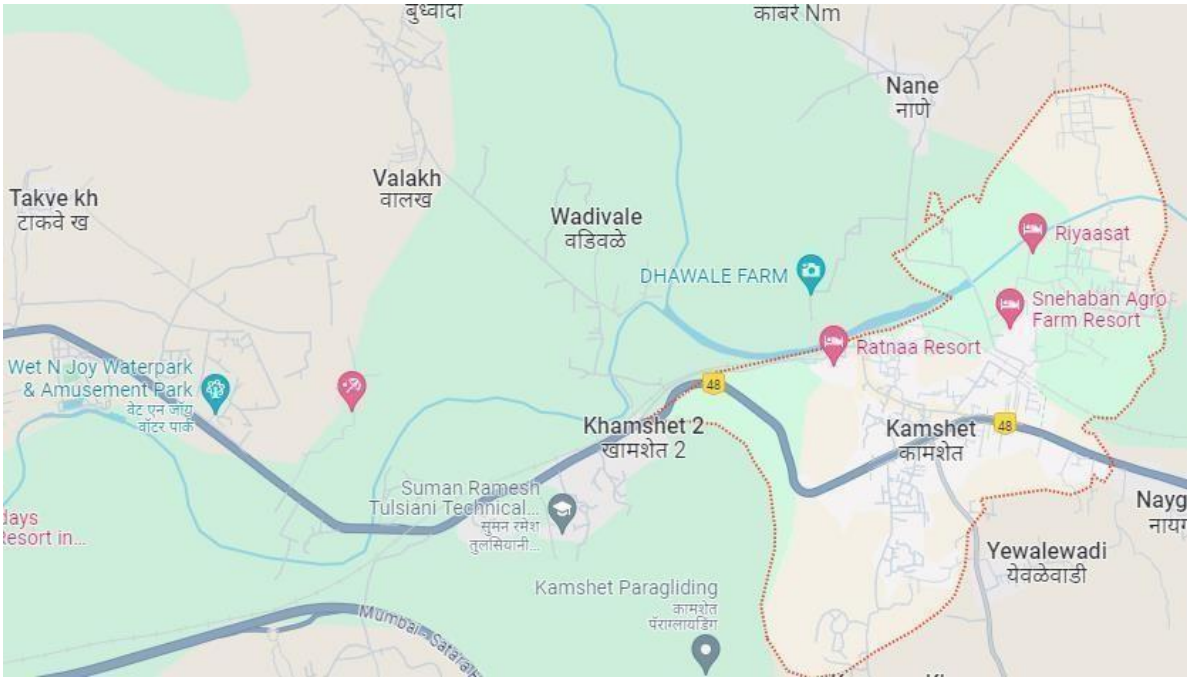
- To introduce and aware students to real concerns of environment and its sustainability.
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use on the campus.
- To establish a baseline data to assess future sustainability of ambiance.
- To bring out a status report on environmental compliance.
- To suggest some practices to make a campus eco-friendlier.
- To suggest protocol for adding sustainable development.

COLLEGE CAMPUS LOCATION

Suman Ramesh Tulsiani Technical Campus - Faculty of Engineering

GAT NO. 81,82,91,92,94.97,99,101,102 & 106(PART),

MAUJE KHAMSHET,TAL.MAVAL, DIST. PUNE, Maharashtra, Pincode: 410405



Use of Natural Resources (Ventilation & Day Light)

Natural Ventilation and Lighting: The college building is designed and constructed with a focus on natural ventilation and lighting. This helps create a comfortable and healthy indoor environment for students and staff.

Wide Corridors: The corridors in the college are wide, allowing for easy movement of people and ensuring proper ventilation. Additionally, good ceiling height is maintained to further enhance ventilation.

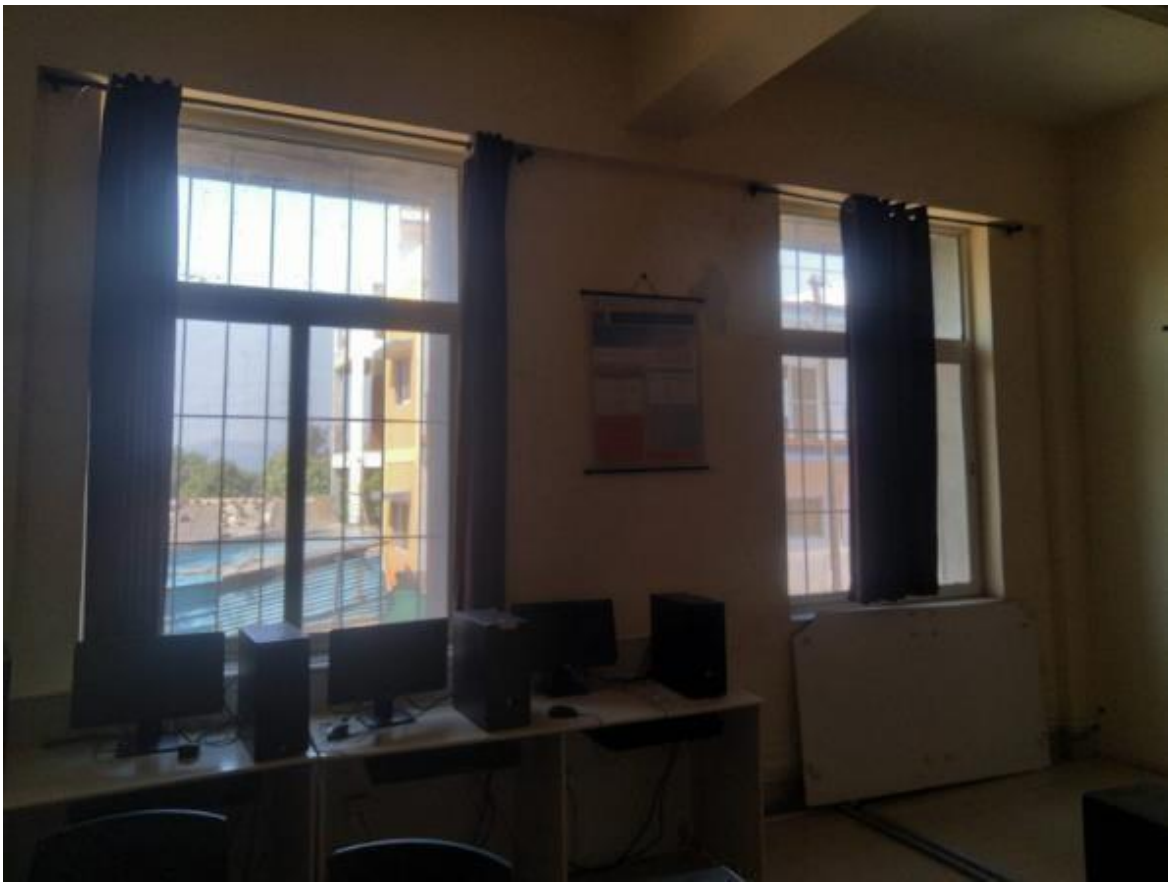
Daylight in Corridors and Rooms: Most corridors receive ample daylight, contributing to a bright and cheerful atmosphere. Classrooms, labs, and the library are equipped with large windows to maximize natural light intake. This not only reduces the need for artificial lighting but also promotes a more conducive learning environment.

Curtains for Reflection and Distraction: Curtains are provided in classrooms to control natural light, avoiding reflections and distractions for students. This

ensures that students can focus on their studies without any unnecessary disruptions.

Safety and Comfort: Classrooms are designed to provide easy and safe exit routes during emergencies while also maximizing ventilation and sunlight intake. This prioritization of safety and comfort enhances the overall learning experience for students and faculty.

Overall, these design features demonstrate the college's commitment to creating an environment that supports both academic excellence and the well-being of its community members.



3. Methodology:

In order to perform green audit, the methodology included different tools such as physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, preparation of questionnaire, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Water management
- Waste management
- Green Energy initiatives
- Tree plantation
- Education as a tool for propagating thought of Eco friendly development.

4. Observations and Recommendations:

I. Water management:

i. Rain Water Harvesting structure and utilization in the campus:

A Rain Water Harvesting structure has been developed in our campus with a motto of conserving water and to avoid a future water scarcity. The storage tank is located near to E building of the institute which collects water from roof top area of about 600 m^2. Two tanks are constructed which has a capacity to store the 165000 has lit. of water. Water stored in the tank is used to complete water required of flushing

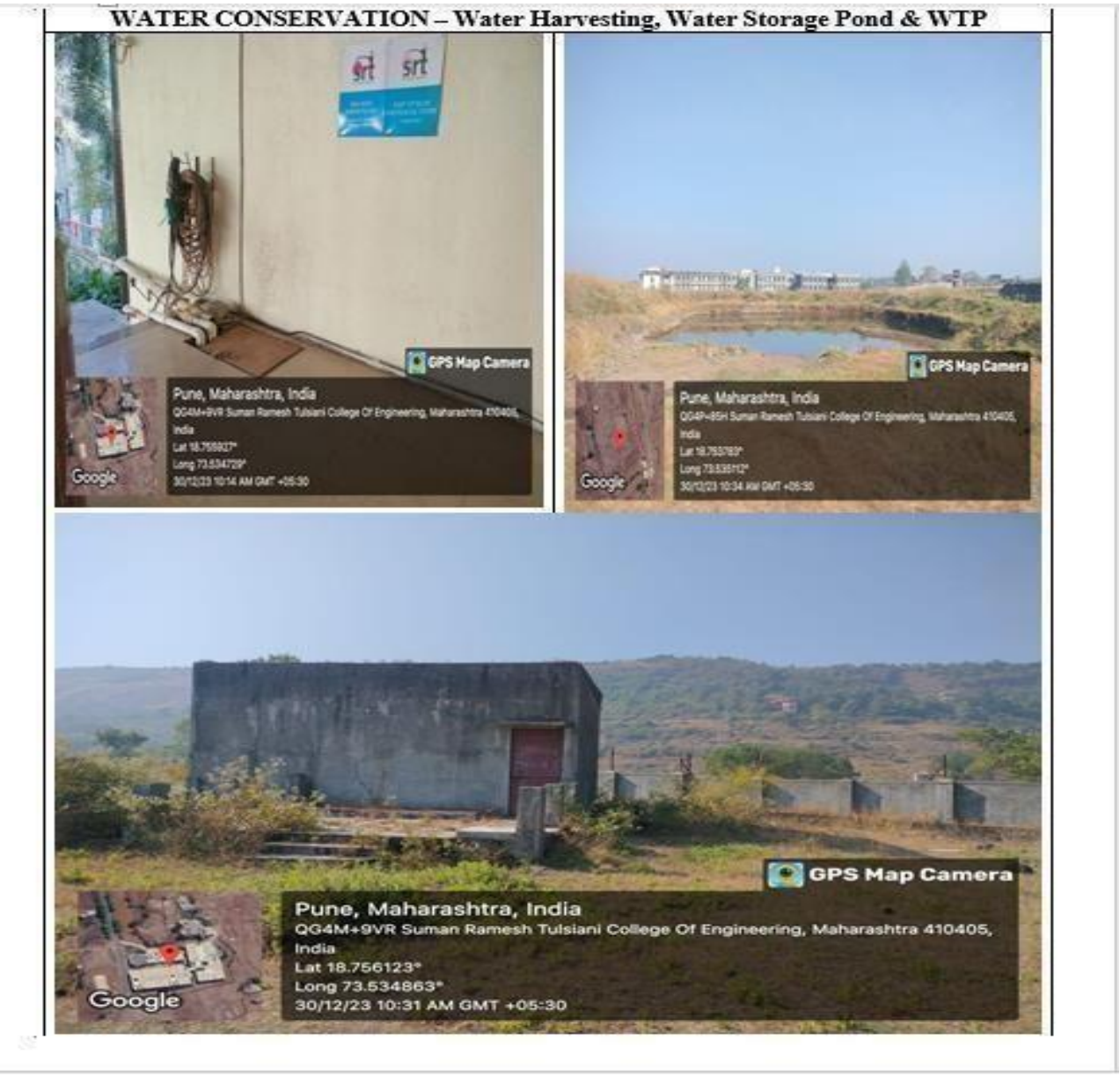
Some Statistical Data:

Sr. No.	Area/ Capacity	Area
1	Total campus area	85115 m^2
2	Total built up area	16300 m^2
3	Total roof top area for RWH	600 m^2
4	Total RWH capacity	165000 lit

Table No.1 Rain Water Harvesting Unit Details

ii. Liquid Waste management:

Waste water generated in urinals, water closet, laboratories and wash basins is drained to septic tank located in our campus through a central drainage system. The capacity of septic tank is around 35000lit.



Recommendations:

- Total campus area can be utilized for water conservation purpose which will increase water storage.
- To develop a habit of water conservation among all stakeholders of this institution we can display boards in premises for indicating importance of water conservation.

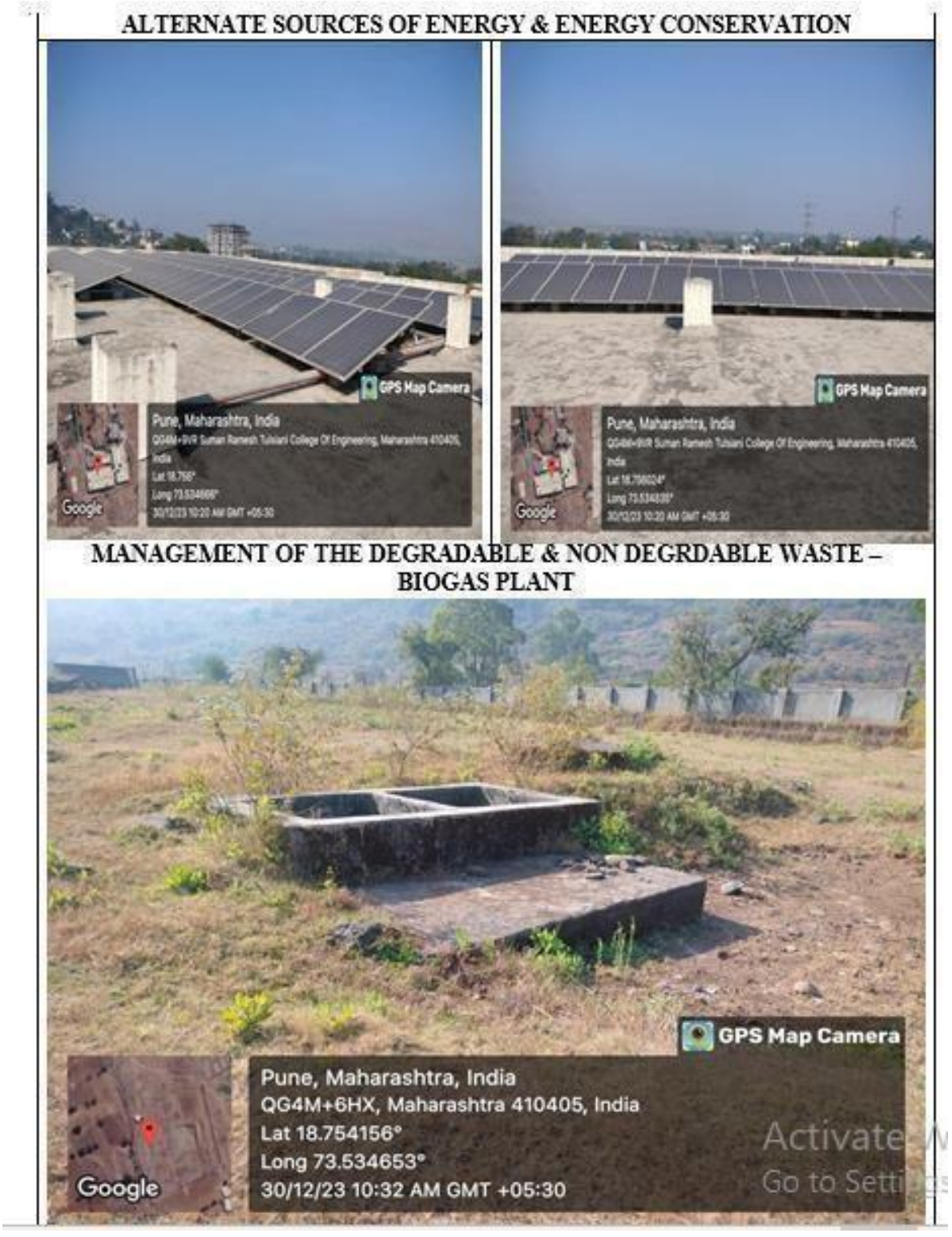
II. Waste management steps:

i. Solid waste management:

All the academic and office buildings, class rooms, laboratories and porches are cleaned by our housekeeping staff on daily basis to maintain campus neat and clean. Dry waste and wet waste bins are placed at various locations of campus to collect waste and in every evening it is collected and disposed by housekeeping staff. Solid waste like papers, canteen waste branches and leaves of trees from garden are dumped in to a compost pit of size 2m*2m located in our campus. The fertilizer generated is used for a gardening purpose in our campus, two timesin a year.

Recommendations:

- A small biogas plant can be constructed, which will consume a canteen waste.
- To minimize this quantity of food waste in canteen we can display a boards having some slogans about food saving.
- Also we can maintain a weight indicator for food wastage.



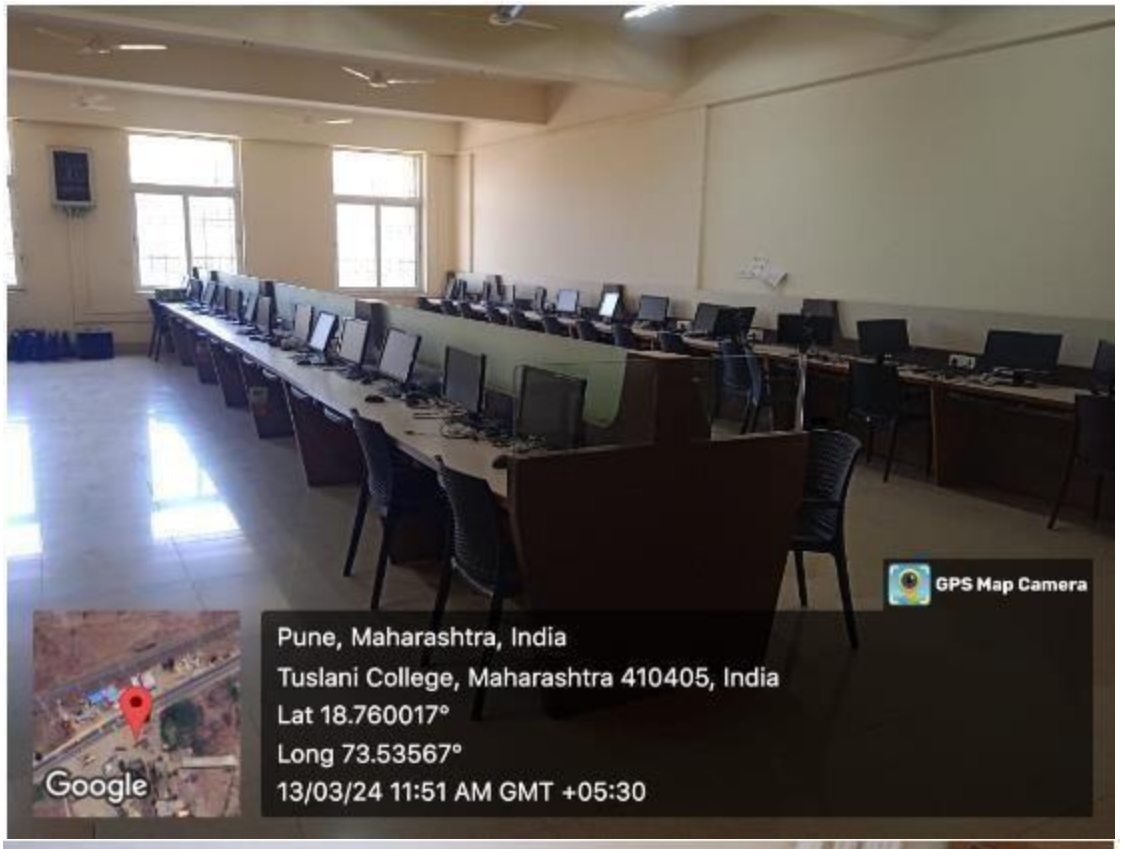
ii. E waste management:

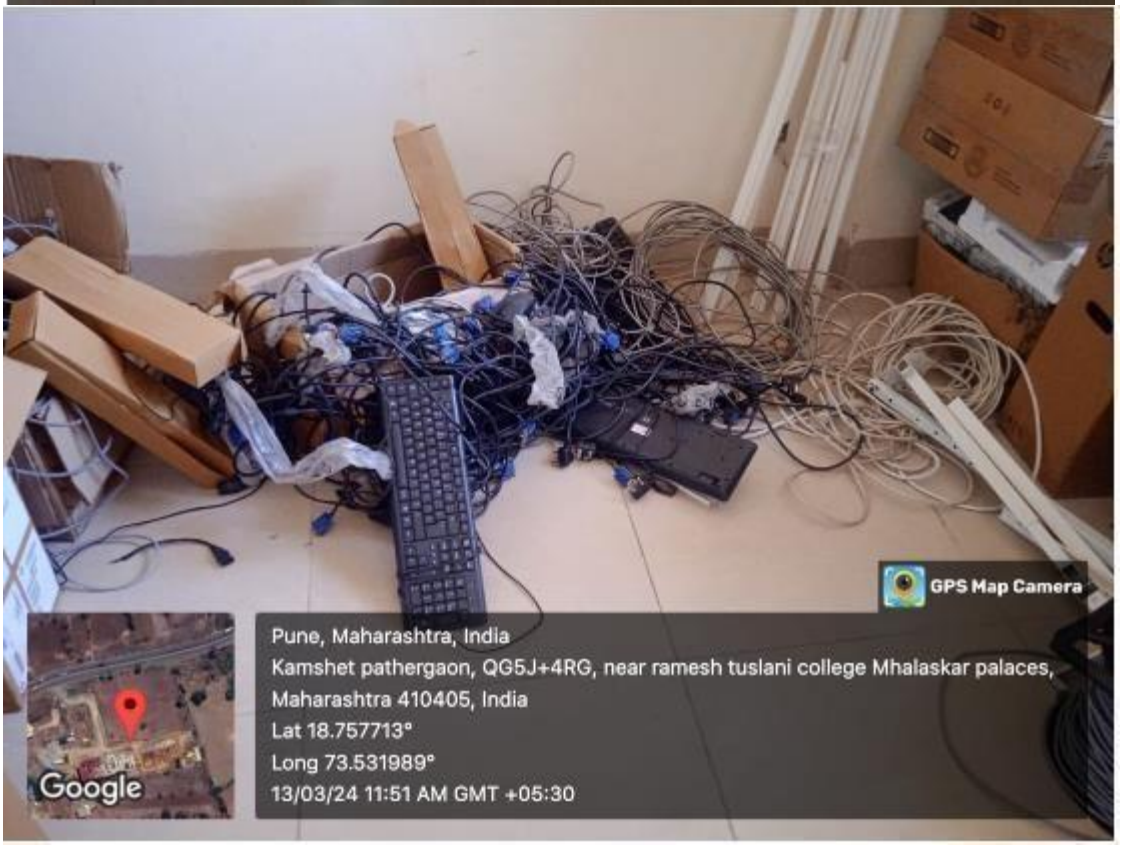
Defectives and obsolete electronic components are collected by the officials of system department and classified according to reuse, resale, salvage, recycling, or disposal A non-repairable /out dated E waste generated during a period 2018 to 2022 has been identified and recommended for disposal through recycling agencies near Maval Region and some of these are used while constructing internal roads of our Institute.

Following is E waste generated and recommended for disposal during this period.

Sr.No.	Waste	Quantity (Unit)
1	Monitor and CPU	25
2	N computing devices	20
3	Key board /mouse	5
4	Telephone	6
5	Printer	1

Table No.2 E-waste Generation Details


GPS Map Camera
Pune, Maharashtra, India
Tuslani College, Maharashtra 410405, India
Lat 18.760017°
Long 73.53567°
13/03/24 11:51 AM GMT +05:30
Google


GPS Map Camera
Pune, Maharashtra, India
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Maharashtra 410405, India
Lat 18.757713°
Long 73.531989°
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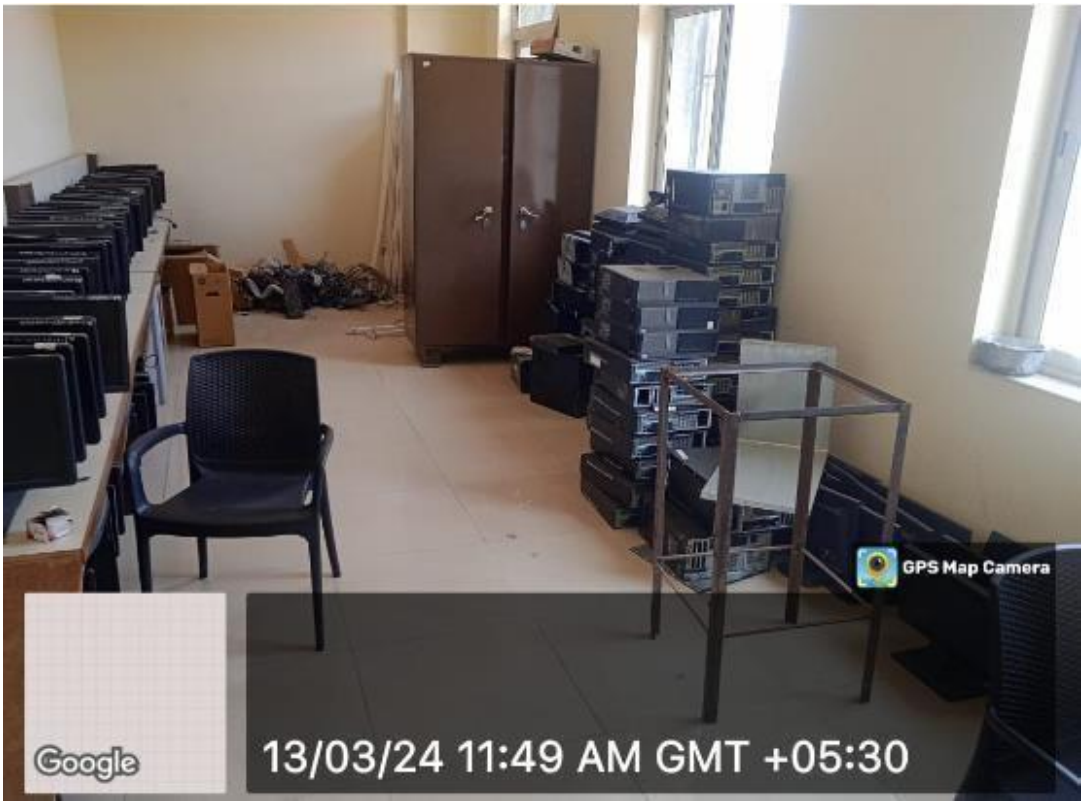

GPS Map Camera
Google
13/03/24 11:49 AM GMT +05:30

III. Green Energy initiatives:

As solar energy is available abundantly in the locality, Institute decided to extract maximum possible renewable energy to reduce dependency on fossil fuel and conventional sources. We have proposed to install a Polycrystalline Photovoltaic cell (PV) solar system with capacity 63kW on the terrace of the institute, which will run by April 2022 with its full capacity. This shows institute commitment towards green practice and sustainable development. The total power requirement of institution is about 60KW. Institute is planning to complete its total power requirement and produce surplus power by renewable energy sources. Institute have already started to replace conventional lighting system with highly efficient lighting such as Light-Emitting Diode (LED), Compact Fluorescent Lamp (CFL)We are also planning to replace all bulbs and tubes by LED bulbs.

Recommendation:

- Replacement of all bulbs and tubes by LED bulbs.
- There is a scope for development of wind mills for energy generation.

IV. Tree Plantation:

Our college has total green cover of about 3200 meter ^{2}. All trees have been planted on both side of roads within premises, near to administrative building, in front of Mechanical department and around playground. After detail survey and interaction with Estate manager we find following garden plant details.

Sr. No.	Local Name	Scientific Name	Quantity
1	Palm	Areca catechu	66
2	Raphia Palm	Raphia palm	141
3	IxoraCoccinea	Ixoracoccinea	170
4	Chaffa	Pluneriarubra	2
5	Son Chaffa	Mangoliachampaca	3
6	Sepelera	Codiaeumvarigatum	65
7	Frostail Palm	Borassusflabellifer	5
8	Heliconia	Heliconia L.	1000

9	Kamini	Murraya exotica	51
10	Songop India	Cinnamomumtamala	20
11	Bhiti	Alstoniascholaris	205
12	Coconut	Cocusnucifera	10
13	Dhuranda	Nyctanthesarbortristis	217
14	Tikoma	Ticomastans	205
15	Bogunwel	Bogunwelia	95
16	PetiFinus	Ficusbenjamina	20
17	Demis	Hepaline	25
18	Sepelera	Codiaeumveriegatum	20
19	Gulfinia	Nyctanthesarbor-tristis	65
20	Plomango	Ailanthus altissimo	300
21	Lemon	Citrus limon	05
22	Chiku	Manilkarazapota	10
23	Kadamb	Neolamarckiacadamba	52
24	Table Palm	Arecaceae	17
25	Jaai (Mahatma tesina)	Thespesiagrandiflora	100
26	Sadhilili	Lilium	200
27	Red Khalifa	Acalyphawilkesiana	50
28	Bottle palm	Hyophorbelagenicaulis	14
29	Kena	Commelinabenghalensis	100
30	Mudho grass	Desmostachyabipinnata	300
31	Gulmohor	Delonixregia	10
32	Ficus	Ficusbenjamina	16
33	Powder puff	Calliandra haematocephala	100
34	Gavatichaha	Cymbopogonschoenanthus	50
35	Lili	Lilium L.	28
36	Khalifa	Acalyphawilkesiana	100

Table No.3 garden plant details

V. Education as a tool for propagating thought of Eco friendly development:

All departments of college try to develop Eco friendly technology by working on projects of last year students and by organising mini project competitions. We also have organized events like tree plantation and Swacchh- Abhiyan to maintain greenery and cleanliness around us.We are also trying to propagate a paperless technology by using a Google class- room, Moodle software. We are also promoting a students and faculty members for using a public transport.

Snap 1.Clean and Green Campus at a Glance

Gulmohor (Delonix regia)

Kadamb (Neolamarckiacadamba)

Areca Palm

Chafa (Pluneriarubra)

Snap 2. Awareness activity about Green and Clean campus organized by SRTTC FoE

Snap 3. Tree Plantation at SRTTC FOE Campus

Snap 4.Clean Campus day

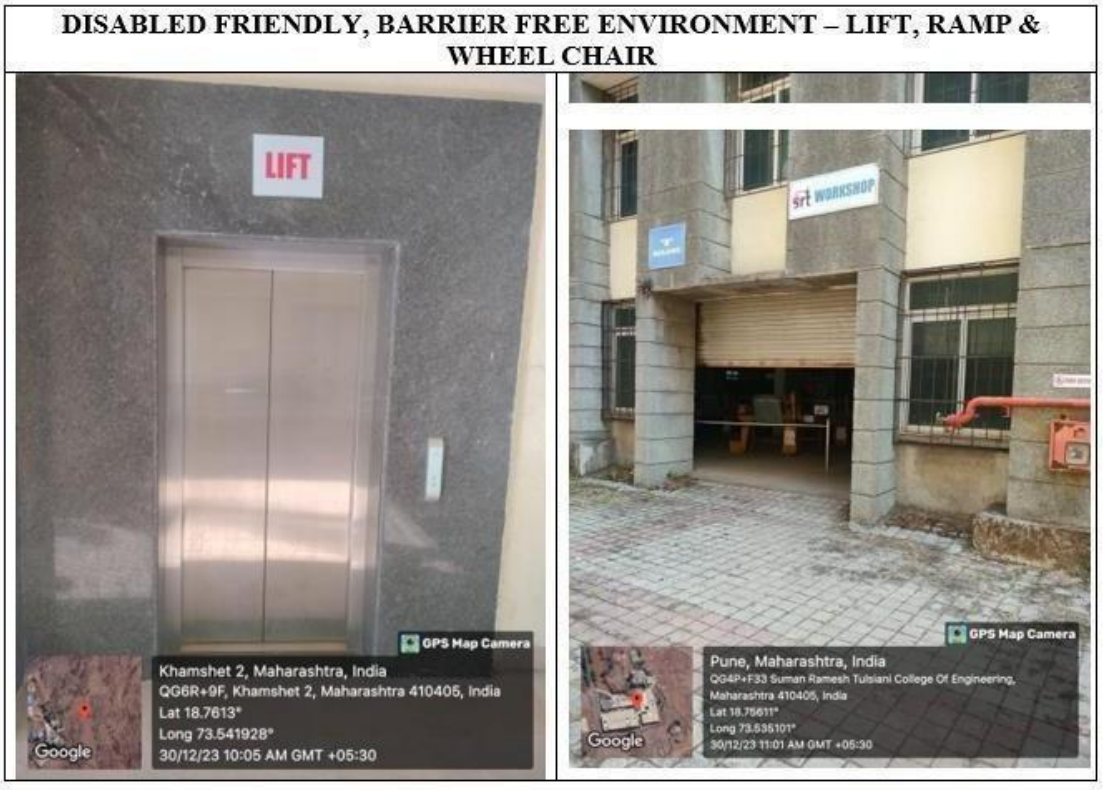
Snap 4. Clean Mess day

Suggestion for Future Improvement of Green & Clean Campus:

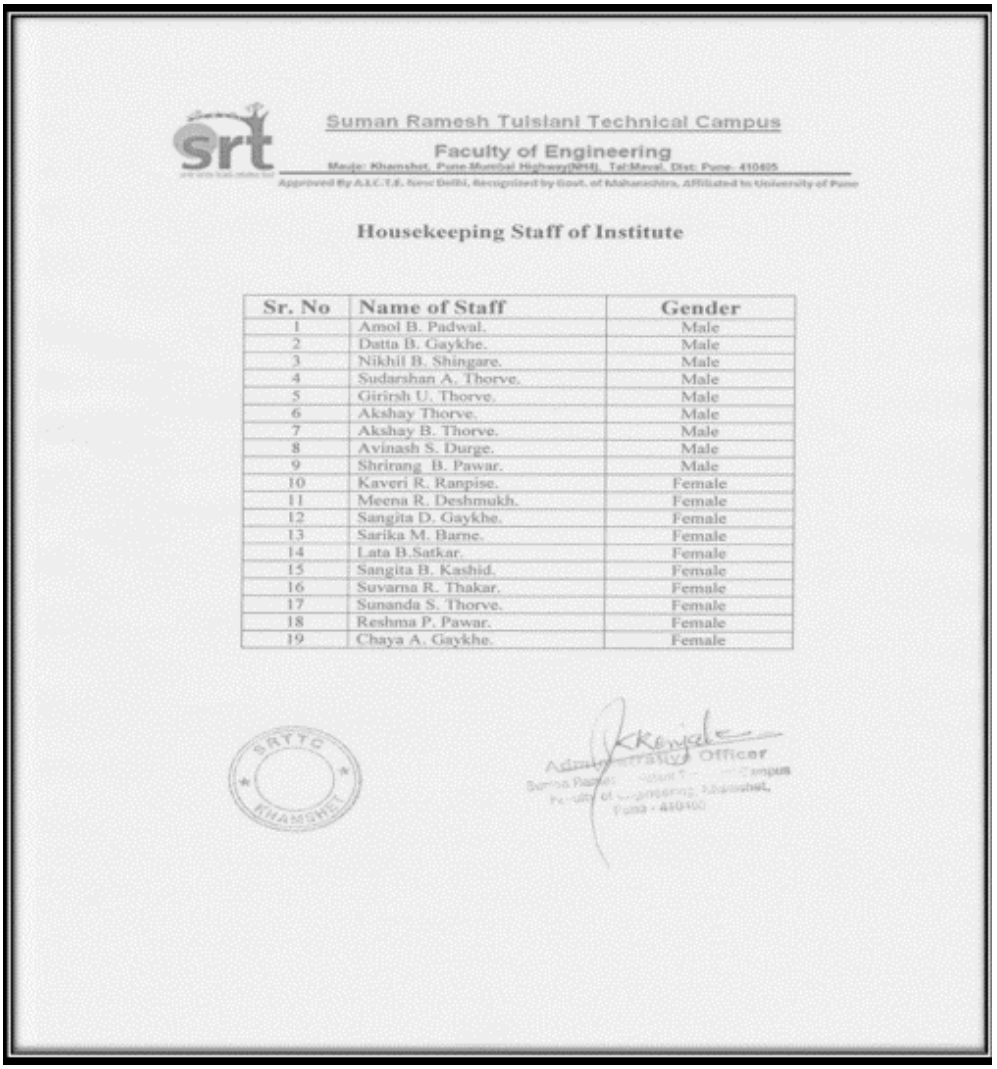
1. Develop the greenery by plantation like trees and plants in the campus.
2. Plantation of water harvesting plants.
3. Provision of Eco friendly Environment.
4. Development of medicinal garden.
5. Organic farming for the support of nature and environment.

Disabled Friendly, Barrier free Environment

Creating a disabled-friendly, barrier-free environment at the Suman Ramesh Tulsiani College of Engineering is crucial to ensure equal access and opportunities for all students, faculty.



Housekeeping Staff of Institute



Suman Ramesh Tulsiani Technical Campus

Faculty of Engineering

Maujе: Khamshet, Pune Mumbai Highway(NH4), Tal:Maval, Dist: Pune. 410405

Approved By A.I.C.T.E. New Delhi, Recognized by Govt. of Maharashtra, Affiliated to University of Pune

Housekeeping Staff of Institute

Sr. No	Name of Staff	Gender
1	Amol B. Padwal.	Male
2	Datta B. Gaykhe.	Male
3	Nikhil B. Shingare.	Male
4	Sudarshan A. Thorve.	Male
5	Girirsh U. Thorve.	Male
6	Akshay Thorve.	Male
7	Akshay B. Thorve.	Male
8	Avinash S. Durge.	Male
9	Shrirang B. Pawar.	Male
10	Kaveri R. Ranpise.	Female
11	Meena R. Deshmukh.	Female
12	Sangita D. Gaykhe.	Female
13	Sarika M. Barne.	Female
14	Lata B.Satkar.	Female
15	Sangita B. Kashid.	Female
16	Suvarna R. Thakar.	Female
17	Sunanda S. Thorve.	Female
18	Reshma P. Pawar.	Female
19	Chaya A. Gaykhe.	Female

SRTTC KHAMSHET

Officer

Drainage Line for Sewage Disposal