



**BASELINE ENVIRONMENTAL ASSESSMENT
(2019-20) OF NUTAN MAHARASHTRA INSTITUTE
OF ENGINEERING AND TECHNOLOGY, PUNE,
SAMARTH VIDYA SANKUL, VISHNUPURI,
TALEGAON DABHADE, TAL. MAVAL, DIS. PUNE,
MAHARASHTRA -410507**

NAAC Accredited

(Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra & Affiliated to Savitribai Phule Pune University)

1. Introduction

COLLEGE INTRODUCTION:

Nutan Maharashtra Institute of Engineering and Technology NAAC Accredited (Approved by AICTE, New Delhi, recognized by Govt. of Maharashtra & Affiliated to Savitribai Phule, Pune University)

Nutan Maharashtra Vidya Prasarak Mandal is a highly respected education society in Maharashtra and is credited with starting national education schools in the Maval Region of Pune district over 100 years ago. The great freedom fighter Lokmanya Bal Gangadhar Tilak was the founder member of the Mandal and was the Chairman of its Governing Body for almost 12 years.

NMIET (Nutan Maharashtra Institute of Engineering and Technology) was founded in 2008. The All-India Council for Technical Education (AICTE) in New Delhi and the Maharashtra Government's Directorate of Technical Education (DTE) have both recognized the institute. It is a part of Pune's Savitribai Phule Pune University (SPPU). There are four undergraduate courses offered by the institute. Computer Engineering, Information Technology, Mechanical Engineering, Electronics, and Telecommunication Engineering are some of the undergraduate courses available. Furthermore, the Nutan Maharashtra Institute of Engineering and Technology (NMIET) began offering Bachelor of Vocational (B.VOC) Courses in 2019. Automotive Manufacturing Technology, Refrigeration and Air Conditioning, Graphics and Multimedia, and Software Development are all B.VoC courses.

Vision:

To be a recognizable institution for providing quality technical education & ensuring holistic development of students.

Mission:

To nurture engineering graduates with highest technical competence, professionalism and problem-solving skills to serve needs of industry & society.

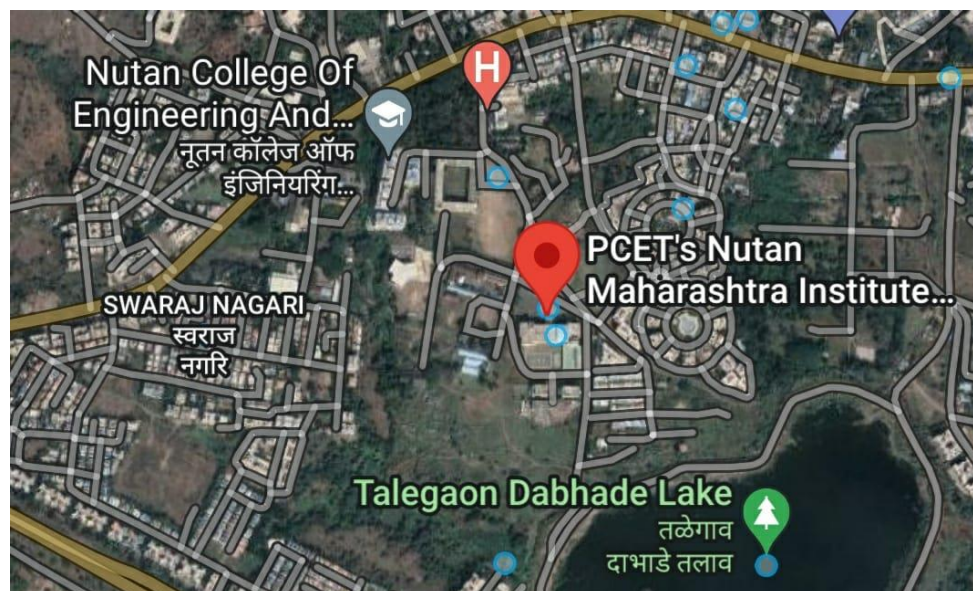
Perspective plan:

1. **NBA Accreditation**
2. **NAAC 'A' Grade Accreditation**
3. **NIRF Ranking within 200**
4. **Increase in Intake from 300 to 420**
5. **Development of Incubation Center**
6. **Development of Center of Excellence in all departments**
7. **Development of Smart Class Rooms**
8. **More interaction with industries (AICTE-CII Survey)**
9. **More placements in Product based company**
10. **Establishment of Community Radio Station**
11. **Development in IT & other infrastructure**
12. **Motivating faculty for Completing and Registration for Ph.D As soon as possible.**
13. **Increase the number of students for Higher Education.**
14. **Increase the number of Publications in International or Reputed journals.**
15. **More IPR and Copyrights.**
16. **Development of IIC cell.**
17. **Development of Consultancy Projects from industry.**
18. **More Number of Alumni engagements.**
19. **More number of Social activities and responsibilities.**
20. **More number of Research Proposals.**

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21. International conference.
22. More number of Industry Visits for students.
23. Increase the number of internships for students.
24. Increase the number of Students certification.(Professional certification, NPTEL etc...)
25. More number of FDP/Workshops/Seminars/Guest Lectures for students and faculty.
26. More number of R&D activities.

The College believes that its primary stakeholders are the students. All aspects of education focus on the core values of contributing to national development while fostering global competencies among students. The College admits students from all social milieus and empowers them through intensive mentoring and counselling to face the challenges of life and become responsible and sensitized citizens of the country.



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Nutan Maharashtra Institute of Engineering and Technology NAAC Accredited (Approved by AICTE, New Delhi, recognized by Govt. of Maharashtra & Affiliated to Savitribai Phule, Pune University) Talegaon *PUNE demonstrates its commitment to implement sustainable solutions in different ways. It has taken a number of positive steps to reduce possible environmental impact. The management is keen on accepting new ideas of resource management.*

The environmental assessment of an educational institute being carried out in different phases.

- To establish a baseline of existing environmental scenario
- To provide basis for improved sustainability
- To promote environmental awareness through the assessment process
- To create an educational document for future use

In view of making green and eco-friendly campus the organization has taken an important step to understand the environmental parameters within the campus. This report serves to highlight, the efforts towards greener campus. The first step taken in this direction is establishing a baseline of existing condition.

The different environmental criteria's with their current status, action being taken by an institution and effective ways to improve the actionable points being highlighted in this report. Sensitization of all the stakeholders of an institution towards eco-friendly campus is very crucial at this juncture.

2. Environmental criteria's

2.1. Know green and think green is promoted on the campus

Governance and Leadership

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The college has Clear policies, principles or goals that provide direction for staff, administrators, and other members of the campus community. Clear decision-making power and reporting mechanisms with responsibilities to monitor, report, give advice about, and promote action and awareness around environmental sustainability.

Action:

The College currently has an Environmental Advisory Committee (EAC), which is composed of members each from different stake holders of the college. It is co-chaired by a student and by the Director of Facilities. The EAC has been very active in discussing and advising the College on campus sustainability issues.

Environmental Advisory Committee-EAC (AY 2019-20)

SN	Name of the Committee Member	Designation
1	Dr. Lalitkumar wadhwa	Advisor
2	Prof. Nitin Dhawas	Chairman
3	Prof. Shekhar Rahane	Coordinator
4	Prof. Sagar Joshi	Member
5	Prof. Vikas Nandgaonkar	Member
6	Prof. Shraddha Kirwe	Member
7	Prof. Manojkumar kate	Member
8	Mr. Mandar Pagle	Non Teaching Member
9	Miss. Nidhi Hegade	Student Member
10	Mr. Shubham Patil	Student Member

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Since commencement, the committee has discussed such topics as campus energy use, recycling, reduce use of plastic, composting of dining hall waste, saving water and sustainable use of resources.

2.2 Dining

The college campus accommodates 1425 members including students and staff. The college authorities have appointed a food supply vendor within the campus area. On an average approximately 600 students and staff utilizing these dining facilities on working days.

Action:

Steps were taken to reduce pre-consumer and post-consumer food waste, by making connections with food pantries and providing better labeled, made-to-order dishes. For the post-consumer food, the remaining waste being given to vendor with official agreement. The garbage being properly collected through well designed network of garbage collection bins throughout campus. The waste dumping site has been created and then it being collected by Municipal system of garbage collection. (**see annexure no. 1**) to collect this organic waste from dining facilities on daily basis. The snacks items being served in paper plates. Plastic being avoided strictly.

2.3 Water conservation and prevention of water wastage

The source of drinking water for the college is Municipal supplied water and Bore water for other uses. The college has water filters with 2,500lit/hour capacity and filter water supplied through 4 water coolers within the premises for drinking purposes. The water quality monitoring is being done regularly. The water consumption within the campus is controlled by campus authority. The storage tanks are as follows

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Storage Water Tank Under Ground – 02 Nos. 10000lit/each

Overhead tank 1: Capacity 07 Nos.- 10000 lit/each

So total water storage capacity 90,000 liters

The approximate water uses on any working day during work hours can be summarized as follows.

S.No	Activity	Utilization(Student + staff)	Total lits
1	Drinking	1425 x approximately 2lit	2850
2	Toilet	1425 x approximately 4lit	5700
3	Laboratories	6 labs x 20 students x approximately 5lits x 2 batches	1200
4	Watering plants		1000
5	Spraying on play ground		1000
6	Canteen area		2000
7	Girls & Boys hostel		5000
			18,750

Action:

- 1) Awareness on minimum and adequate water use.
- 2) Regular water quality monitoring. (Water & Waste water)
- 3) Well planned experimental schedule of different classes. Laboratory waste water discharged into sewage treatment Facility.
- 4) The design of urinals(Indian & western (Washrooms, Urinals & Latrines 35 (Girls, Boys & staff) was made in such way that it gives minimum wastage of water. Drainage water from urinals and canteen discharged into sewage treatment Facility.
- 5) Watering to plants being done by manual sprinklers.
- 6) Ensuring the implementation of water saving devices and techniques.
- 7) Sewage water of campus being collected and treated in Sewage Treatment Plant
The treated water being reused for gardening and cleaning within the campus.

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2.4 Solid waste management

The college working hours is from 9.00am to 6.00pm. There are different activities and projects being implementing in different subjects. The number of students in the campus along with staff members goes to approximately 800. The daily solid waste being generated in the camps categorized in the following way.

S.No	Activity	Utilization(Student + staff)	Total kg.
1	Classroom 25 + Tutorial room 15 Seminar Hall 4 + Staffroom 4 + Girls & Boys common room 2 + Sport room 1 + Training Placement cell 1 + Exam section 1 + Reception area 1	Dustbin 54 x 310gms	16 kg approximately
2	Laboratories 15 + Chemical store 2	Labs 57 x 200 gms	3 kg approximately
3	Canteen	Students & staff used for snacks or meal	4 kg approximately
4	Sweeping and cleaning	Campus	5 kg approximately
5	Admin block	All offices	2 kg approximately
6	Girls & Boys Canteen		6
			36 kg approximately

Action:

- 1) Usage of recycled paper bags was promoted among students by displaying boards like 'Say No to Plastic' (**See annexure 1**)
- 2) Reduce – Reuse – Recycle methods are followed – Different type of chemicals from different laboratories and chemical stores being returned to respective vendor after date expiry.
- 3) Office paper waste being collected and given to vendor for recycling on annual basis.

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4) Examination paper being retained in the institution for 5 years and then given to vendor for shredding which in turn being sent for pulping for generating recycle paper.

5) The collection bins are made for specific types of waste. All these types of waste collected separately and given to respective vendors for recycling. Dry waste b)
Paper waste c) Plastic

6) The number of printouts has been reduced from admin blocks and computer laboratories. The college notices being circulated to teaching and non-teaching staff on E-mails and on official Whatsapp group. The regular necessary printouts were attempted to be taken on used i.e., one sided paper.

7) The college has promoted use of Google drive to share common academic records for day-to-day functioning to reduce paper.

Hazardous waste management

The college authorities are well aware about the monitoring and management of chemical-intensive process. This process considers toxicity, downstream impacts, staff safety, cost and packaging.

Action:

8) The college performs well in terms of custodial chemical use, monitoring their use, minimizing their impact, and keeping employees and others safe.

9) All the chemicals are bought from chemical supply vendors, by contracting on annual basis. The college reduces costs, limits inventory, limits overuse, and help maintain consistent chemicals (consistency helps keep workers safe).

10) The college now is working with some more initiatives, environmentally friendly products such as oxidation products, citric acid-based products, use of Microwave

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synthesizer, safe solvents, minimizing synthetic steps for chemical synthesis (Green Chemistry Initiatives).

11) The attempt being made to accept recyclable packaging material while purchasing chemicals.

12) Laboratory staff members are all well trained by the vendor twice a year to make sure that all staff members are familiar with the chemicals and know how to handle each chemical safely (Reference: Material Safety Data Sheet) Each bottle of chemical has an identical label for each type of bottle it may be found in, so that there isn't confusion over what exactly is in a particular bottle.

E-waste management

The college has a system (Hitech Recovery) to collect e-waste separately in specially designated bin and stored into specifically designed system. The specific authorized vendor Royal Falz Recycling Pvt. LTD has been contracted to for collection and disposal.

2.5 Carbon dioxide neutrality

Carbon dioxide neutrality has been maintained on the campus by developing greenery with available plants. The 10 to 25 % area is occupied by greenery of all type of plants. The list attached with its significance.

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programme.

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Campus is located in the vicinity of various tree species approximately 200. Various tree plantation programs are being organized during the month of July and August at college campus and surrounding villages through NSS unit. This program helps in encouraging eco-friendly actions in the environment which provides pure oxygen within the institute and awareness among citizens. The organization is keen on providing hands on experience to students by providing opportunity to participate in various government initiatives. Students are in real sense being connected to the community at large. The organization has decided to adopt certain villages and to work for rural development purpose.

Action:

- 1) The campus is situated in such an area that there is no any other type of disturbance.
- 2) An indoor atmosphere is designed to be well ventilated that airflow mixing of fresh/outdoor air is continuous.
- 3) Specific strategies and plans in place in order to reduce transportation impacts.
 - A) Parking slot for students (300 bikes) maintained at the main entrance to restrict the traffic movement in the campus.
 - B) Awareness among the students was increased to use public transport.
 - C) The college has a canopy of trees and plants that make the environment healthy.
 - d) Plants were selected with low maintenance requirements and that otherwise fit the local ecosystem (i.e. provide habitat for native species of insects and birds).
 - e) At present the big ornamental trees are dominant all over the campus. The medicinal plants planted and maintained in the campus (List attached). Some plants

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mentioned in list of medicinal plants are really important. The college is planning of botanical garden which will be utilized for educational purpose.

2.6 Campus Culture and Environmental Awareness

The college has aim to educate all students in the area of environmental studies in an interdisciplinary framework, and provide adequate training for those students who wish to pursue environmental research in accordance with engineering or environmentally-related career choices.

Action:

- 1) College has developed a clear assessment of the environmental studies curriculum for faculty, students, and administration.
- 2) The college undertakes various activities through effective use of ongoing schemes like N.S.S., through Earn and learns Scheme. (Annexure 5) Through these schemes students work like beautification of campus, water and power management. The biodegradable and non-biodegradable waste segregation. To create eco-friendly awareness among the students, college arranges special programmes by inviting the eminent personalities, who in turn train and educate stake holders.

College authorities have created an atmosphere of awareness and sense of responsibility within the campus regarding environmental issues. Engaged students, faculty, staff and administration in cooperative analysis and response to these issues.

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Values and ethics

3) College has developed its own environmental policy for the campus and displayed it everywhere.

4) Documentation of Best practices

A Renewable Energy
Solar panel installed at NMIET College.
A clean source of energy is utilized at campus. Efforts towards Carbon Neutrality
The capacity of 25 KW Solar plant on building roofs is commissioned and will be operational in a month that will supply approx. 50% of total power in campus.



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B	Biodiversity Conservation Flora and fauna conservation	They have lush green campus which provides habitat to various species. Recently conducted bird count reports Indian peafowl, Sunbird, black kite, house crow, Humes warbler, large billed crow, wood pecker, jungle babler, common tailor bird, Eurasian collar dove, oriental magpie Robin, bulbul, Green bee eater, brown headed green barbet, Brahmini, Starling, Indian Robin.
C	Tree Plantation Drives Two Drives Annually as well as Every Guest is honored by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
d	Ground Water Recharge 2 units of Rain Water Harvesting System.	Yes, 100% recharge of the rain water
F	E Waste Management Collection of e-waste by staff	E waste is sent to the authorized recyclers for adequate disposal

Environment Policy

We are committed to protect Environment, Occupational Health and Safety of all through our work and activities. We Endeavour to...

Nutan Maharashtra Institute of Engineering and Technology, Talegaon Pune is committed to reduce its impact on the environment. We will strive to improve our environmental performance over time and to initiate additional projects and activities that will further reduce our impacts on the environment.

Our commitment to the environment extends to our students, our staff, and the community in which we operate. We are committed to:

- 1) Comply with all applicable environmental regulations.
- 2) Prevent pollution whenever possible.
- 3) Minimizing waste by reviewing purchasing practices and segregating

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wastes for reuse and recycling.

- 4) Purchase and use environmentally responsible (recyclable, refurbished, etc.) products from environmentally responsible suppliers (i.e. suppliers who emphasize the need for renewable energy supplies).
- 5) Train all of our staff on our environmental program and empower them to contribute and participate.
- 6) Continually improve over time by striving to measure our environmental impacts and by setting goals to reduce these impacts each year.

As per the policy guidelines the institution is implementing

- 1) College is implementing Environmental Module as prescribed by the Savitribai Phule Pune University and Engineering Council.
- 2) Organization of various seminars & workshops on regular basis
- 3) College has taken efforts by putting Environment awareness slogans to inculcate values on students mind. Slogans on walls

3. General Recommendations:

- To reach the goal of a 30% recycling rate, which some institutions have achieved, college should compost food waste and be more vigorous about recycling education.
- College should continue to work towards composting post-consumer food waste generated by the dining areas. In order to help reduce the large amount of post-consumer food waste, the College should provide better labeling and more self-service options and work to educate students about food waste.
- Any future increases in servers should be consolidated in one “machine room,” rather than building another on campus with the same high maintenance

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requirements. Additionally, when the College's phone system is replaced, the central system could also be consolidated in this space.

- The EAC should make decisions with respect to continuous input, interests and commitments of the students, participating faculty, and administration. The college should continue to support the work of the EAC and should ensure that its recommendations are considered carefully and in a timely manner through the appropriate chain of command.
- Chemistry department should encourage "Green Chemistry" program.
- Environment Awareness programmes and Environmental field visits should be arranged on more frequent basis for Hands on Experience.

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4. Conclusions

The findings of this report show that the college performs fairly well on sustainability issues. The college does consider the environmental impacts of most of its actions and makes a concerted effort to act in an environmentally responsible manner. In conversations with faculty, staff, and administration at the college, a major theme has been the improvements made over the last many years in how the college performs environmentally.

Even though the college does perform fairly well, the recommendations in this report highlights many ways in which the college can work to improve its actions and become a more sustainable institution.

In this section, the recommendations are ranked in terms of priority.

4.1 The high priority recommendations are:

- Adopt the proposed Environmentally Responsible Purchasing Policy, and work towards creating and implementing a strategy to reduce the environmental impact.
- With regards to the concerns mentioned in this report, the College should consider adopting specific goals and targets in its pursuit of sustainability.

4.2 The medium priority recommendations are:

- Look towards meeting different environmental standards.
- Continue to support the work of the EAC and should ensure that its recommendations are considered carefully and in a timely manner through the appropriate chain of command.

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4.3 The minor and future concerns are:

- Encourage student project on environmental footprint for College.
- Continue expanding interpretive program to better educate students about natural history and college role in preserving biodiversity and optimum utilization of natural resources.
- Increase price for parking charges and implement it across all types of employees, faculty, and students in order to encourage use of public transport.

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Annexure No1.

Solid Waste Dumping Facility



Dry garbage collection Dust Bin



Garbage Collection system

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Nutan Maharashtra Vidya Prasarak Mandal's (NMVPM's)
**NUTAN MAHARASHTRA INSTITUTE OF
ENGINEERING AND TECHNOLOGY (NMiet)**

Under Administrative Support - Pimpri Chinchwad Education Trust (PCET)



Approved by AICTE

Accredited by NAAC

Affiliated to SPPU

"Samarth Vidya Sankul", Vishnupuri, Telegaon Dabhade, Taluka Maval, District Pune - 410507

Tel. No. 02114 - 231666

E-mail : nmietalegaon@gmail.com

Web : www.nmiet.edu.in

AICTE ID - 1-8618657

AISHE ID - C-41640

DTE ID - 6310

UNIVERSITY ID - CEGP013890

Ref. No. :

Date :

प्रति,
मा . मुख्याधिकारी
तळेगाव दामाडे नगर परिषद
तळेगाव दामाडे .

विषयः नूतन महाराष्ट्र अभियांत्रिकी महाविद्यालयातील ओला व सुका कचरा संकलनाबाबत .

महोदय,

वरील विषयान्वये आंपणास कळविणेत येते की, गेली २ वर्षे कॉलेज अंतर्गत जमा होणारा ओला व सुका कचरा नगर परिषदेच्या ट्रॅक्टरद्वारे संकलित करण्यात येत आहे .

संस्थेच्या ग्रीन ऑडीट सर्टीफिकेशनसाठी त्या संदर्भातील नगर परिषदेचे पत्र आवश्यक असल्याने सदर पत्रक नूतन महाराष्ट्र अभियांत्रिकी महाविद्यालयाच्या नावे कृपया लवकर देण्याची व्यवस्था करावी ही विनंती .



[Signature]
प्राचार्य

Principal
Nutan Maharashtra Institute
of Engg. & Technology
"Samarth Vidya Sankul" Vishnupuri-
Telegaon Dabhade, 410507

Letter to Talegaon Municipal Council

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Annexure 2



Canteen Waste Biogas Plant

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Well maintained storage tanks



**Rain water Storage Tank
Annexure 3**

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E- Waste management Facility



Plantation Drive

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Annexure 4



Resourceful library



Campus area

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Greenery and Parking area of the campus.

Audit Participants

On behalf of Institute:

Name	Position/Department
Dr. Lalitkumar wadhwa	Principal, NMIET College
Prof. Nitin Dhawas	Professor
Prof. Shekhar Rahane	Professor
Prof. Manojkumar kate	Professor

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On behalf of Aditya Envirotech:

Name	Position	Qualification
Dr. Swapnil Sheth	Lead Auditor	M.Sc. (Environment Science), P.hd. Lead Auditor ISO 14001:2015,
Ram Shinde	Co- Auditor	M.Sc. (Environment),



**Office Address- 1, Vignaharta tower, S. No. 15,
Vignaharta Nagar, Nr Chintamani school, Ambegaon
Bk, Pune-411046, Maharashtra, India.
www.adityaenvirotech.com**

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